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The Genus *Laena* Latreille in Nepal, with Taxonomic and Faunistic Notes on Species from the adjacent Himalayas (Coleoptera: Tenebrionidae)*)

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With 202 figures

Summary

The species of the genus *Laena* Latreille 1829 (Coleoptera: Tenebrionidae) from the Himalayas (Himachal Pradesh, Uttar Pradesh, Nepal, Darjeeling, Sikkim, Bhutan) are treated with new data on taxonomy and distribution. From Nepal, all known 46 species are redescribed, additional 17 species are described as new, all 63 species are separated in a key and zoogeographical and biological notes are added. – **New species**: *Laena annapurna* n.sp., *Laena arun* n.sp., *Laena chetri* n.sp., *Laena chomolungma* n.sp., *Laena hartmanni* n.sp., *Laena limbu* n.sp., *Laena magar* n.sp., *Laena manang* n.sp., *Laena martinhauseri* n.sp., *Laena newar* n.sp., *Laena pahakhola* n.sp., *Laena rai* n.sp., *Laena sagarmatha* n.sp., *Laena schmidti* n.sp., *Laena sherpa* n.sp., *Laena tamang* n.sp., *Laena tamur* n.sp. – **New synonyms**: *Laena aenea* Schuster 1926 (*Laena darjeelingiana* Kaszab 1938 n.syn.); *Laena brahmae* Masumoto 1990 (*Laena gomcheyensis* Masumoto 1990 n.syn.); *Laena consimilis* Kaszab 1973 (*Laena mandli* Kaszab 1975 n.syn.); *Laena dentipes* Schuster 1935 [*Laena flavicincta* Kaszab 1938 n.syn., *Laena schusteri* Kaszab 1938 (not Heller 1923) syn., *Laena adriani* Schawaller 2001 (new name for *schusteri* Kaszab 1938) n.syn.]; *Laena fulunga* Kaszab 1973 (*Laena strigosa* Kaszab 1973 n.syn.); *Laena herbertfranzi* Kaszab 1973 (*Laena augur* Kaszab 1973 n.syn., *Laena schusteriana* Kaszab 1973 n.syn., *Laena magarkensis* Masumoto 1990 n.syn.); *Laena laevipennis* Schuster 1926 (*Laena sandakphuensis* Masumoto 1990 n.syn.); *Laena longipilis* Schuster 1926 [*Laena nepalensis* (Jedlička 1965) n.syn.]; *Laena martensi* Kaszab 1973 (*Laena dedita* Kaszab 1973 n.syn., *Laena zurstrasseni* Kaszab 1977 n.syn.); *Laena opacicollis* Kaszab 1970 (*Laena bembidion* Kaszab 1973 n.syn.); *Laena opaca* Kaszab 1970 (*Laena bikhebhanjangensis* Masumoto 1990 n.syn.); *Laena phithangensis* Masumoto 1990 (*Laena shunichii* Masumoto 1990 n.syn.); *Laena pokharana* Kaszab 1973 (*Laena silvicola* Kaszab 1973 n.syn.); *Laena prehimalayica* Kaszab 1976 (*Laena moodlungensis* Masumoto 1990 n.syn.); *Laena similis* Schuster

*) Results of the Himalaya Expeditions of J. Martens, no. 238. – For no. 237 see: Senckenbergiana biol. 81: 147–186, 2001. J. M. sponsored by Deutscher Akademischer Austauschdienst and Deutsche Forschungsgemeinschaft.

**) Contributions to Tenebrionidae, no. 37. – For no. 36 see: Annals Transvaal Mus. 39: 9–21, 2002.

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1926 (*Laena transversicollis* Schuster 1926 n.syn.); *Laena vishnua* Masumoto 1990 (*Laena kephakensis* Masumoto 1990 n.syn.). – **Lectotype** designations for: *Laena almorensis* Schuster 1926, *Laena beesoni* Schuster 1935, *Laena blairi* Schuster 1926, *Laena cameroni* Schuster 1926, *Laena carinata* Schuster 1926, *Laena denticollis* Schuster 1926, *Laena gardneri* Schuster 1935, *Laena orbicollis* Schuster 1926.

Zusammenfassung

Die Arten der Gattung *Laena* Latreille 1829 (Coleoptera: Tenebrionidae) aus dem Himalaya (Himachal Pradesh, Uttar Pradesh, Nepal, Darjeeling, Sikkim, Bhutan) werden behandelt mit neuen Daten zur Systematik und Verbreitung. Aus Nepal werden alle 46 bekannten Arten wiederbeschrieben und zusätzlich 17 neue Arten beschrieben, alle 63 Arten mit einem Bestimmungsschlüssel getrennt und zoogeografische und biologische Anmerkungen beigefügt. **Neue Arten, neue Synonyme** und **Lectotypus**-Festlegungen siehe Auflistung in „Summary".

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1. Introduction

When revising the Asian species of the genus *Laena* Latreille 1829 I found the fauna of the Himalayas highly diverse, so this area seems to be the evolutionary "hot spot" for this genus. This appraisal is already proven for many groups of plants and animals, and here particularly of those with reduced migration possibilities as many flightless taxa of the soil fauna. Obviously, the young folding-up of the Himalayas since the tertiary period causes a huge number of new ecological niches in vertical belts and horizontal mountain ranges, in which a high number of species had evolved from single ancestors. Recently, I treated 71 species of *Laena* (Schawaller 2001a) from China including Tibet; in comparison with this number from a quite big area, 63 species presented in this paper only from the Central Himalayas in the relatively small area of Nepal are remarkable. Additionally, a second genus of the Laenini from Nepal, *Nepalolaena*, with a single species has been recently described (Schawaller 2001b).

Species of the genus *Laena* from the Himalayas have been described in several scattered papers (Schuster 1916, 1926, 1935; Kaszab 1938, 1961, 1965, 1970a, 1970b, 1973, 1975, 1977, 1978; Masumoto 1990). In the present paper I try to summarize our knowledge about this genus in the Central Himalayas of Nepal, based mainly on new collections: 17 new species are described herein, all known species are redescribed, several synonymies are established, a key for all 63 Nepalese species is presented and zoogeographical and biological notes are added.

Type and non-type material from the adjacent Himalayas in the west (Himachal Pradesh, Uttar Pradesh) and in the east (Darjeeling, Sikkim, Bhutan) has been restudied and is listed in chapter 3 (93 species together with the Nepalese species), but not redescribed and figured in this paper. A full revision of those species must

wait for the future, as well as the revision of species from the very western Himalayas (Kashmir, Pakistan) and from the Hindukush (Afghanistan). It seems clear that the inventory of *Laena* species in these areas is still provisional, several new taxa have already been recognized in different collections.

The genus *Laena* Latreille 1829 is distributed from southeastern Europe and the Caucasus to Middle Asia, the Himalayas, China including Tibet, Japan, northern Vietnam, Thailand (SCHAWALLER 1998) and southward to continental Malaysia (SCHAWALLER 1995), and was recently recorded also from southern Africa together with species of 2 other genera of Laenini (ENDRÖDY-YOUNGA & SCHAWALLER 2002). In my previous papers cited above I already discussed the different species characters. What is still lacking is a phylogenetical analysis of this species-rich genus establishing monophyletic subgenera based on synapomorphic characters. In other words, in the present state of knowledge I refrain from "extracting" a few natural species groups and describing them as different genera, and leave the remaining "big pool" phylogenetically unsolved.

Abbreviations

BMNH	British Museum of Natural History (MAX BARCLAY);
HNHM	Hungarian Natural History Museum, Budapest/Hungary (Dr. OTTÓ MERKL);
MHNG	Muséum d'Histoire Naturelle, Genève/Suisse (Dr. GIULIO CUCCODORO);
NHMB	Naturhistorisches Museum, Basel/Switzerland (Dr. DANIEL BURCKHARDT);
NKME	Naturkundemuseum, Erfurt/Germany (MATHIAS HARTMANN);
NSMT	National Science Museum Tokyo/Japan (Dr. SHÛHEI NOMURA);
SMF	Senckenbergmuseum, Frankfurt/Germany (Dr. DAMIR KOVAC);
SMNS	Staatliches Museum für Naturkunde, Stuttgart/Germany (author);
SMTD	Staatliches Museum für Tierkunde, Dresden/Germany (OLAF JÄGER);
ZSM	Zoologische Staatssammlung, München/Germany (Dr. MARTIN BAEHR).

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2. Geographical names

Sometimes, the locality labels show only poor information – villages without detailed informations about the river system or the political districts cannot be localized. Additionally, the same village might have quite different names when asking people from different ethnic groups with their different languages. Some Nepalese and Tibetan words are listed here, being often connected with the given localities:

Batu – path, road
Danda – mountain range
Dara – mountain range
Deorali – mountain range
Gompa – monastery
Himal – snow mountain
Kharka – pasture
Khola – river
La – pass
Lekh – mountain range
Pani – water, spring
Pokhari – lake
Sanghu – bridge.

In this paper, the localities are not originally cited, but are somewhat modified and standardized, transferred to English when labelled in German and listed with additional informations like districts, mountain ranges or river names as far as they could be localized.

3. List of known species from Nepal and the adjacent Himalayas

3.1. *Laena acuticollis* Kaszab 1978

Type locality: India, Darjeeling, Rimbick, 2350 m.
Studied type material: India, Darjeeling, Rimbick, 2350 m, 21.V.1975 leg. W. Wittmer, ♂ holotype NHMB. – Same data as holotype, 1 ♀ paratype HNHM.
New material: Not seen.

Remarks: See *Laena sherpa* n.sp. (chapter 4.15.).
Distribution: India (Darjeeling).

3.2. *Laena aenea* Schuster 1926

Laena darjeelingiana Kaszab 1938 **n.syn.**

Type localities: India, Darjeeling, 7000 ft. (2100 m) (*aenea*). – India, Darjeeling (*darjeelingiana*).
Studied type material: India, Darjeeling, 7000 ft., 11.-20.III.1924 leg. R. W. G. Hingston (Everest Exped.), ♂ holotype of *aenea* BMNH. – India, Darjeeling, leg. Ribbe 1879, ♀ holotype of *darjeelingiana* HNHM.
New material: India, Darjeeling, Ghoom-Lopchu, 2000 m, 12.X.1978 leg. C. Besuchet & I. Löbl, 1 ex. HNHM.

Synonymy: The examined holotypes of both nominal taxa show no distinct specific differences, even when the holotype of *aenea* is a male and the holotype of *darjeelingiana* a female. Thus, *darjeelingiana* Kaszab 1938 is considered as a junior synonym of *aenea* Schuster 1926.
Distribution: India (Darjeeling).

3.3. *Laena affinis* Schuster 1935

Type locality: India, Darjeeling, Senchal, without altitude data.
Studied type material: India, Darjeeling, Senchal R. (? Range), 5.III.1930 leg. J. C. M. Gardner, ♀ holotype BMNH.
New material: Not seen.

Remarks: This single female is quite similar to the male holotype of *aenea* Schuster 1926, but the elytral intervals are absolutely flat and the punctures in the elytral rows are somewhat smaller. The available material from Darjeeling is too poor to decide, whether *affinis* is a valid taxon or a junior synonym of *aenea*.
Distribution: India (Darjeeling).

3.4. *Laena almorensis* Schuster 1926

Type locality: India, Uttar Pradesh, W Almora, Sunderdhunga Valley, 8000–12000 ft. (2450–3660 m).

Studied type material: India, Uttar Pradesh, W Almora Divn. (= Division), Sunderdhunga Valley, 8000–12000 ft. (2450–3660 m), VI.1919 leg. H. G. CHAMPION, 3 syntypes BMNH, 1 ♂ syntype designated herewith as lectotype.

New material: Not seen.

Distribution: India (Uttar Pradesh).

3.5. *Laena alpina* Kaszab 1977 (Figs 28–30)

Type locality: Nepal, Dolpo, Bagar La, 4500–4600 m.

Studied type material: Nepal, Dolpo, ascent to Bagar La, 4500–4600 m, 16.VI.1973 leg. J. MARTENS, ♂ holotype SMF.

New material: Not seen.

Redescription: Body length 5.2 mm. Eyes not prominent. Pronotum (Fig. 28) with big punctures, distance as 1–4 diameters, most punctures with a longer adpressed seta; surface flat and shining; lateral margin pronounced but unbordered; propleures with bigger punctures and similar setation as on disc. Elytra (Fig. 28) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short adpressed seta; intervals with a row of small punctures bearing each a seta of same length, lateral intervals without distinct setiferous pores; all intervals flat and shining. Each femur in males (female unknown) with distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 30, tip of joint parameres rounded and not acute as figured in KASZAB (1977).

Distribution: West Nepal (Dolpo).

3.6. *Laena beesoni* Schuster 1935

Type locality: India, Himachal Pradesh, Simla, Kotkhai, 8000 ft. (2450 m).

Studied type material: India, Punjab, Simla, Kotkhai, Kalala F. (? Forest), 8000 ft. (2450 m), 14.-15.V.1924 leg. C. F. C. BEESON, 2 syntypes BMNH, 1 ♂ designated herewith as lectotype.

New material: Not seen.

Distribution: India (Himachal Pradesh).

3.7. *Laena bhatiai* Schuster 1935

Type locality: India, Uttar Pradesh, Dehra Dun, without altitude data.

Studied type material: India, Uttar Pradesh, Dehra Dun, 16.VI.1926 leg. F. Z., holotype BMNH (sex not examined)

New material: Not seen.

Distribution: India (Uttar Pradesh).

3.8. *Laena bhutanensis* Kaszab 1975

Type locality: Bhutan, Thimphu, without altitude data.

Studied type material: Bhutan, Thimphu, 31.V.1972 expedition Basel museum, 1 ♂ paratype HNHM (mislabelled as "*bhutanica*" Kaszab).

New material: Not seen.

Distribution: Bhutan.

3.9. *Laena blairi* Schuster 1926

Type localities: India, Uttar Pradesh, Chakrata Distr., different localities, 6500–8500 ft. (2000–2600 m).

Studied type material: India, Uttar Pradesh, Chakrata Distr., Kanasar, 7050 ft. (2150 m), 14.-22.V.1922 leg. S. N. Chatterjee, 1 ♂ syntype BMNH, designated herewith as lectotype. – Deoban (? Deohan), Gaunsar, 8500 ft. (2600 m), 24.V.1915 leg. C. F. C. Beeson, 1 ♀ syntype BMNH. – Without locality label, 1 syntype BMNH.

New material: India, Uttar Pradesh, Chakrata Distr., Bodyar, 7.-13.IV.1924 leg. B. M. Bhatia, 1 ♂ BMNH.

Distribution: India (Uttar Pradesh).

3.10. *Laena brahmae* Masumoto 1990

Laena gomcheyensis Masumoto 1990 **n.syn.**

Type localities: India, Sikkim, Phithang, 3660 m (*brahmae*). – India, Sikkim, Gomchey-Phukpa, 3480–3520 m (*gomcheyensis*).

Studied type material: India, W Sikkim, Phithang, near Dzongri, 3660 m, 14.-16.IX.1983 leg. M. Sakai, ♂ holotype of *brahmae* NSMT. – India, W Sikkim, Gomchey-Phukpa, Kangchendzonga area, 3480–3520 m, 23.IX.1983 leg. Y. Nishikawa, ♂ holotype of *gomcheyensis* NSMT (mislabelled as "*gomcheyphukensis*").

New material: Not seen.

Synonymy: When comparing the holotypes of *brahmae* and *gomcheyensis* from the same area in western Sikkim, no specific differences (body size and proportions, punctation and setation, structure of eyes and legs, aedeagus) can be found. In the original descriptions, both are not compared but *brahmae* is compared with *magarkensis* Masumoto 1990 and *gomcheyensis* with *denudata* Kaszab 1975. Thus, both are considered as a single species for which the valid name *Laena brahmae* Masumoto 1990 (*Laena gomcheyensis* Masumoto 1990 n.syn.) is fixed herein.

Distribution: India (Sikkim).

3.11. *Laena broscosomoides* Kaszab 1977 (Figs 92–94)

Type localities: Nepal, S Dhaulagiri, Dhorpatan, 2500–3200 m. – Nepal, Myagdi Khola, Muri, 2100–2300 m.

Studied type material: Nepal, S Dhaulagiri, Dhorpatan, 3000–3200 m, 7.-25.V.1973 leg. J. Martens, ♂ holotype SMF, 4 paratypes SMF, 1 paratype HNHM.

New material: Nepal, Myagdi Distr., Dhorpatan, 3500 m, 10.III.1994 leg. D. Ahrens, 3 ex. SMNS. – Nepal, Kalikot Distr., N Dailekh, Dillkot (=Dillikot) Lasundunga, 2000–2750 m, 15.VII.1995 leg. D. Ahrens, 1 ex. SMNS. – Nepal, Jumla Distr., 5 km N Maharigaon, 3700 m, 6.VII.1999 leg. A. Weigel, 1 ex. NKME. – Nepal, Jumla Distr., Munigaon, 2700–2850 m, 4.V.1995 leg. J. Weipert, 1 ex. NKME. – Nepal, Jumla Distr., Khari (=Khali) Lagna Pass, 3500–3700 m, 23.-24.VI. & 4.VII.1995 leg. D. Ahrens, 2 ex. SMNS, 1 ex. BMNH. – Nepal, Jumla Distr., Khali Lagna Pass, 3500 m, 16.-17.VI.1998 leg. W. Schawaller, 1 ex. SMNS. – Nepal, Jumla Distr., Ghurchi Lagna Pass, 3500 m, 14.VI.1998 leg. W. Schawaller, 2 ex. SMNS. – Nepal, Jumla Distr., N Ludku, 2500–2900 m, 11.VI.1998 leg. W. Schawaller, 3 ex. SMNS. – Nepal, Mugu Distr., Pass N Ludku, 3500 m, 12.VI.1998 leg. W. Schawaller.

Redescription: Body length 9.0–10.0 mm. Eyes not prominent. Pronotum (Fig. 92) with big punctures, distance as 1–6 diameters, most punctures on disc with a shorter adpressed seta, laterally with a longer erect seta; surface uneven and shagreened; lateral margin unbordered; propleures with similar punctation and setation as on disc. Elytra (Fig. 92) with rows of punctures without striae, these rows diminishing in the posterior part, anterior punctures of rows smaller than punctures on

pronotum, most punctures with a short adpressed seta; intervals without punctures and without setae except a few longer erect setae in the humeral region, lateral intervals without distinct setiferous pores; all intervals flat and shagreened. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 94.

Distribution: West Nepal (Jumla to Dhorpatan).

3.12. *Laena cameroni* Schuster 1926

Type localities: India, Uttar Pradesh, Mussoorie, Ringal Gad and Dhobi Ghat, without altitude data.

Studied type material: India, Uttar Pradesh, Mussoorie, Ringal Gad, 15.IV.1922 leg. M. CAMERON, 1 ♀ syntype BMNH, designated herewith as lectotype.

New material: India, Uttar Pradesh, Mussoorie, Kampty Falls, 1500 m, 8.VII.1989 leg. A. RIEDEL, 1 ex. SMNS. – India, Uttar Pradesh, Mussoorie, Dhanolt, 2250 m, 11.VII.1989 leg. A. RIEDEL, 3 ex. SMNS.

Distribution: India (Uttar Pradesh).

3.13. *Laena cardiothorax* Kaszab 1978

Type locality: India, Darjeeling, different localities, 2150–2200 m.

Studied type material: India, Darjeeling, Chim-Khona (Ghum), 2200 m, 4.VI.1975 leg. W. WITTMER, 1 ♂ paratype HNHM. – India, Darjeeling, Tiger Hill, 2150 m, 12.V.1975 leg. W. WITTMER, 1 ♀ paratype HNHM.

New material: Not seen.

Remarks: See *Laena limbu* n.sp. (see 4.6.)

Distribution: India (Darjeeling).

3.14. *Laena carinata* Schuster 1926

Type locality: India, Uttar Pradesh, Chakrata Distr., Konain, 8000 ft. (2450 m).

Studied type material: India, Uttar Pradesh, Chakrata Distr., Konain, 24.-30.V.1922 leg. S. N. CHATTERJEE, 8000 ft. (2450 m), 1 syntype BMNH, designated herewith as lectotype (sex not examined).

New material: Not seen.

Remarks: *Laena carinata* Schuster 1926 and *Laena indica* Fairmaire 1896 are quite similar in body size, proportions, and have elevated elytral intervals 3, 5 and 7, but *carinata* has a dense and confluent pronotal punctation (sparser in *indica*), short adpressed setae on the elytra (naked in *indica*) and particularly oval and not prominent eyes with distinct ocular keel (round and prominent and without ocular keel in *indica*). *Laena grandis* Schuster 1935 might belong to the same group but has the lateral margin of the pronotum unbordered and the punctures in the elytral rows small and in striae. The aedeagi cannot be compared, because the holotype of *grandis* is a female, and the sex of the lectotype of *carinata* and the non-type male of *indica* has not been examined in these few old and fragile specimens.

Distribution: India (Uttar Pradesh).

3.15. *Laena carinipennis* Schuster 1935

Type locality: India, Himachal Pradesh, Kulu, without altitude data.

Studied type material: India, Kulu, 1.-10.VI.1933 leg. R. N. PARKER, ♀ holotype BMNH.

New material: Not seen.

Distribution: India (Himachal Pradesh).

3.16. *Laena championi* Schuster 1926

Type locality: India, Uttar Pradesh, Kumaon Distr., W Almora, without altitude data.
Studied type material: India, Uttar Pradesh, W Almora Divn. (= Division), Kumaon, VI.1919 leg. H. G. CHAMPION, holotype BMNH (sex not examined).
New material: Not seen.

Distribution: India (Uttar Pradesh).

3.17. *Laena chatterjeei* Schuster 1935

Type locality: India, Himachal Pradesh, Simla, Matiana, 7900 ft. (2400 m).
Studied type material: India, Himachal Pradesh, Simla, Matiana, 7900 ft., 30.IX.1921 leg. S. N. CHATTERJEE, holotype BMNH (sex not examined).
New material: Not seen.

Distribution: India (Himachal Pradesh).

3.18. *Laena chaukiensis* Masumoto 1990 (Figs 150–151)

Type localities: Nepal, Terhathum Distr., Chauki, 2750 m. – Nepal, Terhathum Distr., Lam Pokhari, 2800–2900 m.
Studied type material: Nepal, Terhathum Distr., Chauki, 2750 m, 30.X.1979 leg. S.-I. UÉNO, ♀ holotype NSMT.
New material: Not seen.

Redescription: Body length 4.0–5.0 mm. Eyes not prominent. Pronotum (Fig. 150) with bigger punctures, distance 1–3 diameters, most punctures with a short adpressed seta; surface flat and shagreened; lateral margin bordered; propleures with similar punctation and setation as on disc. Elytra (Fig. 150) with complete rows of punctures in feeble striae, punctures of rows distinctly smaller than punctures on pronotum, punctures without or with a very short adpressed seta; intervals with scattered very small punctures bearing each a seta of same length, interval 9 with 3 indistinct setiferous pores; all intervals flat and shagreened. Each femur in females (males unknown) without distinct tooth. Aedeagus unknown (only ♀ holotype).

Remarks: This species is similar as *Laena tachysoides* (unarmed legs, small body size with narrow pronotum and wider elytra, not prominent eyes, pronotum with lateral border, without distinct setation on elytra) but can be recognized by the structure of the elytra with flat intervals and small row punctures in striae (and by bicoloured elytra with light lateral parts). *Laena arun* n.sp. is also similar but has besides other characters a longer setation on the pronotum and elytra. *Laena sparsepunctata* and *goetzi* share also similar body size and proportions but have armed legs. Unfortunately, the aedeagi cannot be compared because the holotypes of *chaukiensis, goetzi* and *sparsepunctata* are all females.

Distribution: East Nepal (Terhathum).

3.19. *Laena clypealis* Fairmaire 1896

Type localities: India, Himachal Pradesh, Simla. – Pakistan, Murree; without altitude data.

Studied type material: None.
New material: Not seen.

Distribution: Pakistan (Murree), India (Himachal Pradesh).

3.20. *Laena coniceps* Kaszab 1973 (Figs 185–187)

Type locality: Nepal, Durumtali (near Barahbise), 2200–2300 m.
Studied type material: Nepal, Barahbise to Ting Sang La (Pa 8–9), 2200–2300 m, 5.VI-II.1970 leg. H. FRANZ, ♂ holotype HNHM.
New material: Nepal, Bagmati Prov., Dobate Ridge NE Barahbise, 2800–3000 m, 2.-7.V.1981 leg. I. LÖBL & A. SMETANA, 1 ex. MHNG, 1 ex. HNHM. – Nepal, Ramechap Distr., Mohabir Khola E Shivalaya, 2500–2600 m, 6.-7.V.1997 leg. W. SCHAWALLER, 2 ex. SMNS. – Nepal, Dolakha Distr., ascent to Hanumante Danda, 2500–2850 m, 23.V.2000 leg. W. SCHAWALLER, 1 ex. SMNS.

Redescription: Body length 4.5–5.2 mm. Eyes prominent. Pronotum (Fig. 185) with big and sometimes with confluent punctures, distance 0.5–2 diameters, most punctures with a short adpressed seta; surface uneven by the confluent punctures and shagreened; lateral margin unbordered in the anterior part and finely bordered in the other parts; propleures with distinctly sparser punctation and similar setation as on disc. Elytra (Fig. 185) with complete but somewhat irregular rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short adpressed seta; intervals with scattered big punctures of same size bearing each a seta of same length, interval 9 with 3 distinct setiferous pores; all intervals convex and shagreened, alternate intervals 3, 5 and 7 slightly elevated. Each femur in both sexes without distinct tooth. Each tibia in males without distinct sexual character, protibia medially somewhat protruding. Aedeagus see Fig. 187.

Remarks: See also *Laena luprops* (see 3.58.).

Distribution: Central Nepal (Barahbise to Shivalaya).

3.21. *Laena consimilis* Kaszab 1973 (Figs 80–82)

Laena mandli Kaszab 1975 **n.syn.**

Type localities: Nepal, Gosainkund, Fulung, 3900 m (*consimilis*). – Nepal, Jumla, Sinja Khola, different localities, 2900–3900 m (*mandli*).
Studied type material: Nepal, Gosainkund to Fulung Monastery (Pa 169), 3900 m, 10.X.1971 leg. H. FRANZ, ♂ paratype of *consimilis* HNHM (aedeagus missing). – Nepal, Jumla area, Dampa Pass to Chauta (Pa 229a), 3900 m, 2.X.1972 leg. H. FRANZ, 3 paratypes of *mandli* HNHM.
New material: Nepal, Mugu Distr., SW Rara Lake, 3200 m, 12.VI.1998 leg. W. SCHAWALLER, 11 ex. SMNS. – Nepal, Jumla Distr., Ghurchi-Lagna Pass, 3500 m, 14.VI.1998 leg. W. SCHAWALLER, 2 ex. SMNS. – Nepal, Jumla Distr., Khali-Lagna Pass, 3500 m, 16.-17.VI.1998 leg. W. SCHAWALLER, 5 ex. SMNS. – Nepal, Jumla Distr., N Khari Lagna (=Khali Lagna), 3280 m, 21.VI.1999 leg. M. HARTMANN & A. WEIGEL, 5 ex. NKME. – Nepal, Gorkha Distr., Chuling Khola, Djongshi Kharka, 5.VIII.1983 leg. J. MARTENS & W. SCHAWALLER, 1 ex. SMNS. – Nepal, Gorkha Distr., Chuling Khola, Meme Kharka, 5.-6.VIII.1983 leg. J. MARTENS & W. SCHAWALLER, 1 ex. SMNS. – Nepal, Ganesh Himal, Marmiche Sangl, S Rupchet, 3200 m, 20.IV.1999 leg. I. GHALÉ, S. GURUNG & al., 3 ex. NKME, 1 ex. SMNS. – Nepal, Ganesh Himal, Rupchet, 3500 m, 21.IV.1999 leg. I. GHALÉ, S. GURUNG & al., 1 ex. NKME. – Nepal, Ganesh Himal, Kharka NW Rupchet, 3100 m, 22.IV.1999 leg. I. GHALÉ, S. GURUNG & al., 1 ex. SMNS. – Nepal, Ganesh Himal, SE slope, Rupchet, 3500–3600 m, 11.VI.2000 leg. I. GHALÉ, S. GURUNG & al., 4 ex. NKME. – Nepal, Ganesh Himal, SE slope, Pansang La, 3700 m, 17.VI.2000 leg. I. GHALÉ, S. GURUNG & al., 1 ex. SMNS. – Nepal, Ganesh Himal, W Pansang La, 3200–3500 m, 18.VI.2000 leg. I. GHALÉ, S. GURUNG & al., 1

ex. NKME. – Nepal, Rasuwa Distr., north slope above Syabru, 3600–3800 m, 17.-19.IV.1985 leg. A. SMETANA, 140 ex. HNHM, 6 ex. SMNS.

Redescription: Body length 4.5–6.0 mm. Eyes not prominent. Pronotum (Fig. 80) with small punctures, distance as 1–6 diameters, most punctures with a long adpressed seta; surface flat and shining; lateral margin finely bordered except in anterior quarter; propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 80) with rows of punctures without striae, these rows somewhat diminishing in the posterior part, punctures of rows as big as or somewhat bigger than those on pronotum, punctures sometimes without, sometimes with a long erect seta; intervals with a few scattered small punctures bearing rarely or often a seta of same length, interval 9 with 3 distinct setiferous pores; all intervals flat and shagreened. Each femur in both sexes with 2 weak corners. Each tibia in males without sexual character. Aedeagus see Fig. 82.

Synonymy: I can find no distinct differences between type-material of *consimilis* and *mandli*, although both taxa have been described from relatively different regions in central and western Nepal. Body size and proportions, punctation, structure of the armed femora and shape of the aedeagus coincide, also in the newly collected material from the Gorkha District and from the Ganesh Himal just between both type localities. The only difference is a somewhat more distinct elytral setation in material from the western Jumla localities, which is considered as infraspecific variation. Thus, *Laena mandli* Kaszab 1975 is a junior synonym of *Laena similis* Kaszab 1973.

Remarks: Quite similar are *Laena franzi* Kaszab 1973 and *Laena pseudofranzi* Kaszab 1975 with comparable aedeagus. But both are distinctly bigger and have femora with distinct tooth-like corners. At the present state of knowledge and without having any intermediate forms I consider both as different, although these differences might be considered later as a gradual development (bigger body size – bigger femoral armatures). In the same group belongs *Laena rhododendri* Kaszab 1977 but with completely unarmed femora and with a distinctly different aedeagus.

Distribution: West and Central Nepal (Jumla to Gosainkund).

3.22. *Laena convexicollis* Reitter 1908

Type locality: India, Himachal Pradesh, Kulu, without altitude data.
Studied type material: India, Kulu, leg. ROST, holotype HNHM.
New material: Not seen.

Distribution: India (Himachal Pradesh).

3.23. *Laena crenulicollis* Kaszab 1977 (Figs 127–129)

Type locality: Nepal, Myagdi Khola, Muri, 2100–2300 m.
Studied type material: Nepal, S Dhaulagiri, Myangdi (= Myagdi) Khola, Muri, 2100–2300 m, III.-IV.1970 leg. J. MARTENS, ♂ holotype SMF.
New material: Nepal, Mustang Distr., right bank of Lethe Khola near Lethe, 2400 m, 5.-7.V.1995 leg. J. MARTENS & W. SCHAWALLER, 2 ex. SMNS.

Redescription: Body length 5.6–7.0 mm. Eyes prominent. Pronotum (Fig. 127) with big and confluent punctures, distance below 1 diameter, most punctures with a short seta; surface uneven by the confluent punctures and shining; lateral margin pronounced by distinct teeth but unbordered; propleures with distinctly sparser

punctation and similar setation as on disc. Elytra (Fig. 127) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a very short adpressed seta; intervals with scattered small punctures bearing each a seta of same length, interval 9 with 3 distinct setiferous pores; all intervals convex, with microganules and shagreened. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 129.

Remarks: See *Laena annapurna* n.sp. (see 4.1.) and *Laena magar* n.sp. (4.7.), both also with roughly punctured pronotum with crenulated or dentate lateral margin.

Distribution: Central Nepal (Dhaulagiri area).

3.24. *Laena dampaensis* Kaszab 1975 (Figs 22–24)

Type localities: Nepal, Jumla, Dampa Pass, 3500 m. – Nepal, Jumla, Dzunda Khola, 3000–3500 m.

Studied type material: Nepal, Jumla, Dzunda Khola near Talphi, 3000–3500 m, 19.IV.1972 leg. H. FRANZ, 1 ♀ paratype HNHM.

New material: Nepal, Jumla Distr., Gothichaur, 2600–2700 m, 2.V.1995 leg. J. WEIPERT, 1 ex. NKME. – Nepal, Jumla Distr., 2 km W Gothichaur, 2700 m, 20.V.1995 leg. A. WEIGEL, 4 ex. NKME. – Nepal, Jumla Distr., 2 km W Gothichaur, 2850 m, 13.VI.1997 leg. M. HARTMANN, 1 ex. NKME, 1 ex. SMNS. – Nepal, Jumla Distr., Gothichaur Khola, 2800 m, 8.VI.1997 leg. A. WEIGEL, 1 ex. NKME. – Nepal, Jumla Distr., Gothichaur Khola, 2800 m, 12.VI.1997 leg. A. WEIGEL, 1 ex. NKME. – Nepal, Jumla Distr., Maharigaon, 3300–3400 m, 20.VI.1997 leg. M. HARTMANN & J. WEIPERT, 4 ex. NKME. – Nepal, Jumla Distr., NE Maharigaon, 3300 m, 20.VI.1997 leg. A. WEIGEL, 3 ex. NKME. – Nepal, Jumla Distr., Garjyakot, 2600 m, 22.V.1995 leg. J. WEIPERT, 1 ex. NKME. – Nepal, Jumla Distr., Jharjwala 14 km E Jumla, 2600 m, 23.V.1995 leg. M. HARTMANN, 1 ex. NKME. – Nepal, Jumla Distr., Jumla, 23.V.1995 leg. A. WEIGEL, 1 ex. NKME. – Nepal, Jumla Distr., 2 km W Churta, 2900 m, 4.V.1995 leg. M. HARTMANN, 1 ex. SMNS. – Nepal, Jumla Distr., 2 km E Churta, 3100 m, 19.V.1995 leg. M. HARTMANN, 1 ex. SMNS. – Nepal, Jumla Distr., Pass 10 km E Churta, 3800 m, 7.V.1995 leg. A. WEIGEL, 2 ex. NKME. – Nepal, Jumla Distr., 10 km SE Churta, Bavaria Langna Pass, 3800 m, 6.VI.1997 leg. A. WEIGEL, 1 ex. SMNS. – Nepal, Dolpa Distr., Pass NW Chaurikot, 3800 m, 7.V.1995 leg. M. HARTMANN, 1 ex. NKME. – Nepal, Dolpa Distr., Rimi, 3000 m, 16.V.1995 leg. A. WEIGEL, 1 ex. SMNS.

Redescription: Body length 4.0–4.7 mm. Eyes not prominent. Pronotum (Fig. 22) with small punctures, distance as 1–6 diameters, most punctures with a long adpressed seta; surface flat and shagreened; lateral margin unbordered; propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 22) with complete rows of punctures without striae, punctures of rows somewhat bigger than punctures on pronotum, punctures with a short adpressed seta; intervals with a row of distinct punctures bearing each a seta of same length, interval 9 with 3 indistinct setiferous pores; all intervals flat and shagreened. Each femur in both sexes with distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 24 (nontype ♂ from Jumla).

Remarks: See *Laena manang* n.sp. (4.8.).

Distribution: West Nepal (Jumla to Dolpo).

3.25. *Laena denticollis* Schuster 1926

Type locality: India, Uttar Pradesh, Kumaon Distr., W Almora, without altitude data.

Studied type material: India, Uttar Pradesh, Kumaon, W Almora, leg. H. G. CHAMPION, 1 ♀ syntype BMNH, designated herewith as lectotype.

New material: India, Uttar Pradesh, W Almora Dn. (=Division), U. Gumti Valley, IV.1919 leg. H. G. CHAMPION, 1 ex. BMNH. – India, Kashmir, Srinagar, Zabarwon Hill, 28.V.1967 leg. G. TOPÁL, 2 ex. HNHM (det. KASZAB).

Remarks: Both specimens from Srinagar have the pronotum only with quite weak spined anterior corners (distinctly spined in the specimens from Almora), all other characters coincide.

Distribution: India (Kashmir, Uttar Pradesh).

3.26. *Laena denticrus* Fairmaire 1896

Type locality: India, Himachal Pradesh, Simla, without altitude data.

Studied type material: India, Simla, holotype of syn. *dentipennis* Reitter HNHM (sex not examined).

New material: India, Himachal Pradesh, Simla, Kufri, 16.VII.1989 leg. A. RIEDEL, 3 ex. SMNS.

Distribution: India (Himachal Pradesh).

3.27. *Laena dentipes* Schuster 1935 (Figs 43–45)

Laena flavicincta Kaszab 1938 **n.syn.**
Laena schusteri Kaszab 1938 (not Heller 1923) syn.
Laena adriani Schawaller 2001 (new name for *schusteri* Kaszab 1938) **n.syn.**

Type localities: India, Darjeeling, Debrepani, 6000 ft. (1850 m) (*dentipes*). – "South India, Trichinopoly" wrong, probably Darjeeling; without altitude data (*flavicincta*, *schusteri*).

Studied type material: India, Darjeeling, Debrepani, 6000 ft., 1.III.1930 leg. J. C. M. GARDNER, ♀ holotype of *dentipes* BMNH. – India or., Trichinopoly, ♂ holotype of *flavicincta* HNHM. – India or., Trichinopoly, ♀ holotype of *schusteri* HNHM.

New material: India, Darjeeling, Debrapani, 1700 m, 30.V.1980 leg. G. TOPÁL, 5 ex. HNHM, 1 ex. SMNS. – India, Darjeeling, Kurseong, 18.X.1967 leg. G. TOPÁL, 1 ex. HNHM. – Nepal, Ilam Distr., Mai Pokhari, 2100 m, 31.III.-1.IV.1980 leg. J. MARTENS & A. AUSOBSKY, 9 ex. SMNS. – Nepal, Ilam Distr., N Mai Pokhari, 2000–2400 m, 27.III.1980 leg. J. MARTENS & A. AUSOBSKY, 1 ex. SMNS. – Nepal, Ilam Distr., Mai Pokhari, 2150–2250 m, 23.-25. VIII.1983 leg. J. MARTENS & B. DAAMS, 7 ex. SMNS.

Redescription: Body length 4.0–6.0 mm. Eyes not prominent. Pronotum (Fig. 43) with big punctures, distance 0.5–3 diameters, most punctures with a very short adpressed seta; surface flat or with a pair of feeble impressions on the disc and distinctly shagreened; lateral margin bordered; propleures with similar punctation as on disc and without setation. Elytra (Fig. 43) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a very short adpressed seta; intervals only with very few small punctures or with denser and bigger punctation, punctures bearing each a very short adpressed seta, interval 9 with 3 distinct setiferous pores; all intervals flat or sometimes slightly convex and distinctly shagreened. Each femur in both sexes with distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 45 (non-type ♂ from Mai Pokhari).

Synonymy: The examined holotypes of *dentipes* Schuster 1935 (female), *flavicincta* Kaszab 1938 (male) and *schusteri* Kaszab 1938 (female) show no distinct specific differences, thus *dentipes* is the oldest and valid name for this taxon. The series from adjacent eastern Nepal (Mai Pokhari) contains females, which are identical with the holotype of *dentipes* and also males being identical with the holotype of *flavicincta*. The name *schusteri* Kaszab 1938 is not available because of the older

Laena (syn. *Psilolaena*) *schusteri* Heller 1923 and was replaced by the new name *adriani* by SCHAWALLER (2001), which is now a new synonym of *flavicincta* Kaszab 1938.

Remarks: The punctation on the elytral intervals is somewhat variable: in some specimens, also in the holotype of *dentipes*, this punctation is nearly absent – in other specimens a fine punctation is present as in the holotype of *flavicincta*. All other specific characters are identical. See also *Laena tamur* n.sp. (4.17.).

Distribution: India (Darjeeling), East Nepal (Ilam).

3.28. *Laena denudata* Kaszab 1975

Type localities: Bhutan, different localities, 1900–2300 m.

Studied type material: Bhutan, km 87 from Phuntsholing, 14. & 22.V.1972 expedition Basel museum, 2 paratypes HNHM. – Bhutan, Chimakothi, 1900–2300 m, 22.V.1972 expedition Basel museum, 1 paratype HNHM.

New material: Bhutan, Thimphu, 2500 m, 1.-18.VII.1988 leg. C. HOLZSCHUH, 1 ex. SMNS.

Distribution: Bhutan.

3.29. *Laena dhorpatanica* Kaszab 1977 (Figs 138–140)

Type locality: Nepal, S Dhaulagiri, Dhorpatan, 3000–3200 m.

Studied type material: Nepal, S Dhaulagiri, Dhorpatan, 3000–3200 m, IV.-V.1970 leg. J. MARTENS, ♂ holotype SMF (aedeagus damaged).

New material: Not seen.

Redescription: Body length 4.9 mm. Eyes not prominent. Pronotum (Fig. 138) with big and often with confluent punctures, distance 0.5–2 diameters, most punctures with a longer adpressed seta; surface uneven by the confluent punctures and shining; lateral margin not pronounced and unbordered; propleures with distinctly sparser punctation and similar setation as on disc. Elytra (Fig. 138) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short adpressed seta; intervals with scattered small punctures bearing each a seta of same length, interval 9 with 3 distinct setiferous pores; all intervals slightly convex, with microganules and shining. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 140 (damaged in the holotype, from KASZAB 1977).

Distribution: West Nepal (Dhorpatan).

3.30. *Laena espagnoli* Kaszab 1965

Type locality: India, Sikkim, Donkung, 15750 ft. (4800 m).

Studied type material: India, Sikkim, Donkung, 15370 ft. (sic !), 22.VI.1959 leg. F. SCHMID, 1 ♂ paratype HNHM (mislabelled as "*español*" Kaszab).

New material: Not seen.

Remarks: See under *Laena kangchendzongensis* Masumoto 1990 (3.48.) from Sikkim and eastern Nepal. A single female from Nepal (Solukhumbu Distr., near Lukla, pasture Dugdinma, 3000–4000 m, without date leg. H. FRANZ, HNHM) was identified by the late Dr. KASZAB as *espagnoli*. In my eyes, this female belongs to either *espagnoli* or *kangchendzongensis*, but a sure identification without any male from the same locality seems impossible.

Distribution: India (Sikkim).

3.31. *Laena franzi* Kaszab 1973 (Figs 83–85)

Type localities: Nepal, Goropani, 2600–2800 m. – Nepal, Thakkhola, Tukche/Thaksang, 3200–3800 m. – Nepal, Thakkhola, above Marpha, 3500 m.

Studied type material: Nepal, Thakkhola, Ainorasha near Marpha (Pa 120), 3500 m, 22.IX.1971 leg. H. Franz, 1 paratype HNHM.

New material: Nepal, Tukche/Thaksang (Kaszab 1975). – Nepal, Thakkhola and Dhorpatan, different localities (Kaszab 1977). – Nepal, S Dhaulagiri, Dhorpatan, 3000–3200 m, IV./V.1970 leg. J. Martens, 1 ex. SMNS. – Nepal, Mustang Distr., Purano (=old, upper) Marpha, 3200–3600 m, 22.-25.IV.1980 leg. J. Martens & A. Ausobsky, 5 ex. SMNS. – Nepal, Mustang Distr., Purano Marpha, 3200 m, 9.-11.V.1995 leg. J. Martens & W. Schawaller, 7 ex. SMNS, 2 ex. BMNH. – Nepal, Dhaulagiri, upper Marpha, 3200 m, 5.VI.1996 leg. J. Schmidt, 3 ex. SMNS. – Nepal, Dhaulagiri Himal, Kali Gandaki, Sirkung, 2700–2800 m, 28.V.2001 leg. J. Schmidt, 2 ex. NKME. – Nepal, Parbat Distr., between Chitre and Ghandrung, Chitre side of the pass, 2800–3050 m, 4.-7.V.1980 leg. J. Martens & A. Ausobsky, 5 ex. SMNS. – Nepal, Parbat Distr., between Deorali and Chitre, 2700 m, 1.-2.V.1995 leg. J. Martens & W. Schawaller, 2 ex. SMNS. – Nepal, Parbat Distr., N slope of Ghoropani Pass, 2750–3100 m, 5.-7.X.1983 leg. A. Smetana & I. Löbl, 6 ex. MHNG, 2 ex. HNHM. – Nepal, S Annapurna, Khopra, 3650–3700 m, 21.V.2001 leg. I. Hirthe, 1 ex. NKME. – Nepal, S Annapurna, E Dhasia Khola, 3500 m, 20.V.2001 leg. J. Schmidt, 2 ex. NKME. – Nepal, S Annapurna, below Khopra, 3000 m, 24.-25.V.2001 leg. J. Schmidt, 2 ex. NKME. – Nepal, Dhaulagiri, upper Myagdi Khola Valley, 3400–3500 m, 4.VII.1998 leg. C. Berndt & J. Schmidt, 3 ex. NKME.

Redescription: Body length 5.6–7.0 mm. Eyes not prominent. Pronotum (Fig. 83) with small punctures, distance as 2–7 diameters, most punctures with a long adpressed seta; surface flat and shining; lateral margin finely bordered except in anterior half; propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 83) with rows of punctures without striae, these rows somewhat diminishing in the posterior part, punctures of rows somewhat bigger than those on pronotum, punctures on disc mostly without seta; intervals with a few scattered small punctures bearing very rarely a short seta, interval 9 with 3 distinct setiferous pores; all intervals flat and shagreened. Each femur in both sexes with a distinct tooth-like corner and additionally with a second weak corner. Each tibia in males without sexual character. Aedeagus see Fig. 85 (parameres longer than figured by Kaszab 1977).

Remarks: See *Laena consimilis* Kaszab 1973 (3.21.).

Distribution: West and Central Nepal (Dhorpatan to Annapurna).

3.32. *Laena franziana* Kaszab 1973 (Figs 161–163)

Type locality: Nepal, Gosainkund, Bulumje, 2000–2200 m.

Studied type material: Nepal, Gosainkund, between Sunderijal and Mulkharka, above Bulumje (Pa 158), 2000–2200 m, 7.X.1971 leg. H. Franz, ♀ paratype HNHM.

New material: Nepal, Kathmandu Valley, Siwapuri (=Sheopuri) Dara, 2450–2500 m, 29.IV.-2.V.1985 leg. A. Smetana, 5 ex. HNHM, 1 ex. SMNS. – Nepal, Bagmati Prov., below Thare Pati, 3300 m, 10.IV.1981 leg. I. Löbl & A. Smetana, 2 ex. MHNG. – Nepal, Bagmati Prov., Mere Dara, 3200 m, 8.IV.1981 leg. I. Löbl & A. Smetana, 1 ex. MHNG. – Nepal, Bagmati Prov., Gul Bhanjyang, 2600 m, 6.IV.1981 leg. I. Löbl & A. Smetana, 1 ex. SMNS.

Redescription: Body length 3.6–4.0 mm. Eyes not prominent, somewhat reduced. Pronotum (Fig. 161) with small punctures, distance as 2–6 diameters, most punctures with a longer adpressed seta; surface flat and shagreened; lateral margin bordered; propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 161) with complete rows of punctures without striae, punctures of rows distinctly bigger than punctures on pronotum, punctures without or with a very short

seta; intervals with scattered small punctures bearing each a long and erect seta, interval 9 with 4 distinct setiferous pores; all intervals slightly convex and shining. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 163 (non-type ♂ from Sheopuri).

Distribution: Central Nepal (Gosainkund to northern Kathmandu Valley).

3.33. *Laena freudei* Kaszab 1961 (Figs 65–67)

Type locality: Nepal, Marsyandi Valley, Manang, 4000 m.

Studied type material: Nepal, Manangbhot, Naur Khola (Gunsa-Chame), 4000 m, 6.VII.1955 leg. F. LOBBICHLER, holotype ZSM (sex not examined), 1 ♂ paratype HNHM.

New material: Nepal, Dolpo, Charka and Barbung Khola, different localities (KASZAB 1977). – Nepal, E Annapurna, between Bhratang and Pisang, 3000 m, 27.IX.1992 leg. J. SCHMIDT, 1 ex. SMNS. – Nepal, Humla Distr., 16 km W Simikot, 3–4 km NW Sankha La, 3900–4250 m, 29.VI.2001 leg. E. GRILL & M. HARTMANN, 3 ex. NKME. – Nepal, Humla Distr., 16 km W Simikot, 2 km NW Sankha La, 4250–4950 m, 29.VI.2001 leg. E. GRILL, 2 ex. NKME. – Nepal, Humla Distr., 18 km NW Simikot, Chumsa Khola Bridge, 2900–3000 m, 21.VI.2001 leg. M. HARTMANN, 1 ex. SMNS. – Nepal, Humla Distr., 16 km N Simikot, 3 km NW Sankha La, 4250–4600 m, 30.VI.2001 leg. M. HARTMANN, 2 ex. NKME, 1 ex. SMNS. – Nepal, Humla Distr., 20 km W Simikot, 2 km S Chala, Kairang Khola, 3200–3500 m, 26.VI.2001 leg. A. KOPETZ, 1 ex. NKME. – Nepal, Humla Distr., 20 km W Simikot, 3 km W Chala, 3700–4300 m, 24.VI.2001 leg. E. GRILL, A. KOPETZ & A. WEIGEL, 12 ex. NKME, 5 ex. SMNS. – Nepal, Humla Distr., 16 km W Simikot, 3 km NW Sankha La, 4000–4300 & 4300–4800 m, 29.-30.VI.2001 leg. A. KOPETZ, 3 ex. NKME, 1 ex. SMNS. – Nepal, Humla Distr., 8.5 km SE Chala, before Sankha La, 4400–4700 m, 28.VI.2001 leg. J. WEIPERT, 2 ex. NKME.

Redescription: Body length 4.5–6.0 mm. Eyes not prominent. Pronotum (Fig. 65) with small punctures, distance as 2–6 diameters, most punctures with a short adpressed seta; surface flat and shining; lateral margin bordered; propleures with similar punctures and similar setation as on disc. Elytra (Fig. 65) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short adpressed seta; intervals with a row of small punctures bearing each a seta of same length, lateral intervals without distinct setiferous pores; all intervals flat and shining. Anterior femur in both sexes with a blunt corner, middle and posterior femora with distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 67, tip of joint parameres rounder and not acute as figured in KASZAB (1977).

Remarks: See also *Laena tibialis* (3.90.), similar is also *Laena alticola* Blair from adjacent Tibet (SCHAWALLER 2001a).

Distribution: West and Central Nepal (Humla to Manang).

3.34. *Laena fulunga* Kaszab 1973 (Figs 179–181)

Laena strigosa Kaszab 1973 **n.syn.**

Type localities: Nepal, Gosainkund, Fulung, 3300 m (*fulunga*). – Nepal, Gosainkund, Mulkharka to Khoserebos, 1800 m (*strigosa*).

Studied type material: Nepal, Gosainkund, below Fulung (Pa 175), 3300 m, 11.X.1971 leg. H. FRANZ, 1 ♀ paratype of *fulunga* HNHM. – Nepal, Gosainkund, between Mulkhaka and Thare Pati (Pa 153), 1800 m, 5.X.1971 leg. H. FRANZ, 1 ♂ paratype of *strigosa* HNHM.

New material: Nepal, Bagmati Prov., Dobate Ridge NE Barahbise, 2700–3000 m, 2.-7.V.1981 leg. I. LÖBL & A. SMETANA, 22 ex. MHNG, 4 ex. SMNS, 1 ex. HNHM. – Nepal, Bagmati Prov., Chaubas, 2600 m, 5.IV.1981 leg. I. LÖBL & A. SMETANA 1 ex. MHNG. – Nepal, Chautara Distr., Nauling Lekh, 9500 ft. (2900 m), 11.-20.VI.1983 leg. M. BRENDELL, 11 ex. BMNH, 3 ex. SMNS. – Nepal, Kathmandu, Siwapuri Dara, 2300–2400 m, 30.IV. &

3.V.1985 leg. A. SMETANA, 3 ex. HNHM. – Nepal, Kathmandu, Sheopuri (=Siwapuri) Range, 2100–2300 m, 25.VI.1988 leg. J. MARTENS & W. SCHAWALLER, 4 ex. SMNS.

Redescription: Body length 3.0–4.3 mm. Eyes not prominent. Pronotum (Fig. 179) with bigger punctures, distance as 1–4 diameters, most punctures with a long erect seta; surface flat and shining; lateral margin bordered; propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 179) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a long erect seta; intervals with very few small punctures bearing each a seta of same length, interval 9 with 4 distinct setiferous pores; all intervals convex and shining. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 181.

Synonymy: The studied type-material of *fulunga* and *strigosa* from the same area in Gosainkund show no distinct differences. Particularly, I cannot find any differences in the punctation near the epipleures (what is said to be the main difference by KASZAB 1973). Additionally, the aedeagus of the male paratype of *strigosa* has the parameres with a rounded tip as figured for *fulunga* (and not with an acute tip). Thus, I consider both as a single species and fix for this taxon herein the valid name *fulunga* Kaszab 1973 (*strigosa* Kaszab 1973 n.syn.).

Distribution: Central Nepal (Gosainkund to Barahbise).

3.35. *Laena gairibasensis* Masumoto 1990 (Figs 1–3)

Type locality: India, Darjeeling, Singalila Dara, 2600 m.

Studied type material: India, Darjeeling, Singarila (= Singalila) Ridge at the border of Nepal, Gairibas, 2600 m, 5.XI.1981 leg. M. SAKAI, ♂ holotype NSMT.

New material: Nepal, Ilam Distr., Gitang Khola, 2550 m, 28.-31.III.1980, leg. J. MARTENS & A. AUSOBSKY, 9 ex. SMNS. – Nepal, Panchthar Distr., Dhorpar Kharka, 2700 m, 27.-28.VIII.1983 leg. J. MARTENS & B. DAAMS, 4 ex. SMNS. – Nepal, Panchthar Distr., Dhorpar Kharka, 2700 m, 13.-16.IV.1988 leg. J. MARTENS & W. SCHAWALLER, 7 ex. SMNS, 2 ex. BMNH. – Nepal, Taplejung Distr., Omje Kharka NW Yamputhin, 2300–2500 m, 1.-6.V.1988 leg. J. MARTENS & W. SCHAWALLER. – Nepal, Taplejung Distr., Lassetham NW Yamputhin, 3500 m, 6.-7.IX.1983 leg. J. MARTENS & B. DAAMS, 2 ex. SMNS. – Nepal, Taplejung Distr., upper Simbua Khola near Tseram, 3250–3350 m, 10.-15.V.1988 leg. J. MARTENS & W. SCHAWALLER, 1 ex. SMNS.

Redescription: Body length 4.3–6.5 mm. Eyes slightly prominent. Pronotum (Fig. 1) with big and confluent punctures, distance below 1 diameter, most punctures with a longer adpressed seta; surface uneven by the confluent punctures, with a pair of indistinct impressions and shagreened; lateral margin pronounced but unbordered; propleures with sparser punctation and similar setation as on disc. Elytra (Fig. 1) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a longer adpressed seta; intervals with scattered small punctures bearing each a seta of same length, interval 9 without setiferous pores; intervals slightly convex and shagreened, alternate interval 3 slightly, intervals 5 and 7 distinctly keel-like, keels of intervals 5 and 7 abruptly ending in the posterior quarter of the elytra, keel of interval 7 longer than of interval 5. Each femur in both sexes with distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 3.

Distribution: India (Darjeeling), East Nepal (Ilam, Taplejung).

3.36. *Laena gardneri* Schuster 1935

Type locality: India, Uttar Pradesh, Chakrata Distr., Mundali, without altitude data.
Studied type material: India, Uttar Pradesh, Chakrata, Mundali, 29.V.1934 leg. J. C. M. GARDNER, 1 ♀ syntype BMNH designated herewith as lectotype. – India, Uttar Pradesh, Chakatra, Mundali, 14.IV.1933 leg. J. C. M. GARDNER, 1 ♀ syntype BMNH.
New material: Not seen.

Distribution: India (Uttar Pradesh).

3.37. *Laena gebieni* Reitter 1906

Type locality: India, "Kashmir", Sintan, without altitude data.
Studied type material: India, Kashmir, leg. ROST, paratype HNHM.
New material: India, Himalchal Pradesh, Rohtang Pass, Mahri, 3300–3600 m, 21.-22. VII.1989 leg. A. RIEDEL, 1 ex. SMNS.

Distribution: India (Kashmir, Himachal Pradesh).

3.38. *Laena goetzi* Kaszab 1970 (Figs 41–42)

Type locality: E Nepal, Jumbesi, 2700 m (not localized, probably Jumbesi in Solukhumbu Distr.).
Studied type material: E Nepal, Jumbesi, 2700 m, 2.VI.1963 leg. K. YODA, ♀ holotype HNHM.
New material: Not seen.

Redescription: Body length 3.5 mm. Eyes not prominent. Pronotum (Fig. 41) with bigger punctures, distance 0.5–4 diameters, most punctures with a short adpressed seta; surface flat and shagreened; lateral margin bordered; propleures with sparser punctation and similar setation as on disc. Elytra (Fig. 41) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, punctures without setae; intervals with scattered very small punctures bearing sometimes a short seta, intervals without distinct setiferous pores; all intervals slightly convex and shining. Each femur in females (males unknown) with distinct tooth. Aedeagus unknown (only ♀ holotype).

Remarks: See *Laena chaukiensis* Masumoto 1990 (3.18.) and *Laena rai* n.sp. (4.12.).

Distribution: Central Nepal (Solukhumbu).

3.39. *Laena grandis* Schuster 1935

Type locality: India, Uttar Pradesh, Kali Valley, Almora, 8000 ft. (2450 m).
Studied type material: India, Uttar Pradesh, Kali Valley, Almora, 8000 ft., 8.VII.1923 leg. R. N. PARKER, ♀ holotype BMNH.
New material: Not seen.

Remarks: See *Laena carinata* Schuster 1926 (3.14.).

Distribution: India (Uttar Pradesh).

3.40. *Laena herbertfranzi* Kaszab 1973 (Figs 167–171)

Laena augur Kaszab 1973 **n.syn.**
Laena magarkensis Masumoto 1990 **n.syn.**
Laena schusteriana Kaszab 1973 **n.syn.**

Type localities: Nepal, Gosainkund, different localities, 2000–4200 (!) m (*herbert-*

franzi). – Nepal, Gosainkund, Fulung, 3900 m (*augur*). – Nepal, Gosainkund, Fulung, 3300 m (*schusteriana*). – Nepal, N Ting Sang La, Magarka Danda, 3260 m (*magarkensis*).

Studied type material: Nepal, Gosainkund, 3500–4200 m, IX.-X.1971 leg. H. Franz, 2 ♂♂ paratypes of *herbertfranzi* HNHM. – Nepal, Gosainkund to Fulung Monastery (Pa 169), 3900 m, 10.X.1971 leg. H. Franz, ♂ holotype of *augur* HNHM. – Nepal, Gosainkund, below Fulung (Pa 174), 3300 m, 11.X.1971 leg. H. Franz, ♂ holotype of *schusteriana* HNHM. – Nepal, Dolakha Distr., Magarka Danda, N Tinsang (=Tingsang) La, 12.XI.1979 leg. S.-I Uéno, ♀ holotype of *magarkensis* NSMT (mislabelled as "*magarkadandensis*").

New material: Nepal, Rasuwa Distr., north slope above Syabru, 3600–3800 m, 17.-18.IV.1985 leg. A. Smetana, 25 ex. HNHM, 5 ex. SMNS. – Nepal, Rasuwa Distr., Gosainkund, Larabina Pass, 4000–4100 m, 20.IV.1985 leg. A. Smetana, 1 ex. HNHM. – Nepal, Nuwakot Distr., between Ghopte and Thare Pati, 3250 m, 23.IV.1985 leg. A. Smetana, 1 ex. HNHM. – Nepal, Bagmati Prov., Jangtang Ridge NE Barahbise, 3250 m, 5.V.1981 leg. I. Löbl & A. Smetana, 6 ex. MHNG, 2 ex. SMNS.

Redescription: Body length 3.3–4.8 mm. Eyes not prominent. Pronotum (Fig. 167) with bigger punctures, distance as 0.5–3 diameters, most punctures with a longer adpressed seta; surface flat and shagreened; lateral margin bordered; propleures with sparser punctation and similar setation as on disc. Elytra (Fig. 167) with complete rows of punctures without striae, punctures of rows somewhat smaller than punctures on pronotum, most punctures with a longer adpressed seta; intervals with a row of small punctures bearing each a seta of same length, lateral intervals without distinct setiferous pores; all intervals flat and shining. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Figs 169–170.

Synonymy: When describing *herbertfranzi* and *augur* from the Gosainkund area, Kaszab (1973) mentioned as main difference the diameter of the tibiae which are said to be thicker in *augur* and thinner in *herbertfranzi*. However, these "differences" are connected with the different body size of both holotypes and are not specific characters. Additionally, studied syntopic type material from both taxa show no distinct differences. *Laena schusteriana* Kaszab 1973 was also described by a single immature male also from Gosainkund and separated from *herbertfranzi* and *augur* mainly by a finer elytral punctation (other characters like body proportions, setation and aedeagus coincide). The new material shows that this "difference" in punctation is just a infraspecific variation. *Laena magarkensis* Masumoto 1990 from the adjacent Ting Sang La is compared with *schusteriana* Kaszab 1973 and separated only by a "more irregularly punctate clypeus", by the lateral margins of the pronotum "feebly crenulated posteriad" and by "the rows of punctures in intervals more distinct". All characters of the restudied holotype of *magarkensis* fully correspond with those of the other studied types and non-type material. Thus I consider all mentioned nominal taxa as a single species, for which the valid name *herbertfranzi* Kaszab 1973 is fixed herein (*augur* Kaszab 1973 n.syn., *schusteriana* Kaszab 1973 n.syn., *magarkensis* Masumoto 1990 n.syn.).

Distribution: Central Nepal (Gosainkund to Ting Sang La).

3.41. *Laena himalayana* Schuster 1915

Type locality: India, Himachal Pradesh, Simla, without altitude data.

Studied type material: None, type and/or non-types not in BMNH.

New material: India, Simla, 1 ex. HNHM (compared with the type by Kaszab according to label).

Distribution: India (Himachal Pradesh).

3.42. *Laena incomperta* Kaszab 1973 (Figs 16–18)

Type locality: Nepal, Kathmandu Valley, Phulchoki, 2500–2700 m.

Studied type material: Nepal, Kathmandu, Phulchoki (Pa 16), 2600 m, 9.VIII.1970 leg. H. FRANZ, 2 ♂♂ paratypes HNHM. – Nepal, Kathmandu, Phulchoki, 2500 m, 21.II.1970 leg. J. MARTENS, 1 paratype HNHM.

New material: Nepal, Kathmandu Valley, Phulchoki (KASZAB 1977). – Nepal, Kathmandu Valley, Phulchoki, 8800 ft. (2680 m), 27.-31.V.1983 leg. M. BRENDELL, 13 ex. BMNH, 2 ex. SMNS. – Nepal, Kathmandu Valley, Phulchoki, 2500–2700 m, 19.-22.III.1980 leg. J. MARTENS & A. AUSOBSKY, 3 ex. SMNS. – Nepal, Kathmandu Valley, Phulchoki, 2300–2500 m, 10.V.1981 leg. I. LÖBL, 2 ex. HNHM. – Nepal, Kathmandu Valley, Phulchoki, 2550–2650 m, 19.-23.IV.1982 leg. A. & Z. SMETANA, 38 ex. MHNG, 4 ex. SMNS, 2 ex. HNHM. – Nepal, Kathmandu Valley, Phulchoki, 2550–2650 m, 13.-16.X.1983 leg. I. LÖBL & A. SMETANA, 19 ex. MHNG. – Nepal, Kathmandu, Phulchoki, 2500–2550 m, 28.-30.IV.1984 leg. I. LÖBL & A. SMETANA, 15 ex. MHNG. – Nepal, Kathmandu Valley, Siwapuri (Sheopuri) Dara, 2450–2520 m, 30.IV.-1.V.1985 leg. A. SMETANA, 6 ex. HNHM, 2 ex. SMNS.

Redescription: Body length 2.8–3.6 mm. Eyes not prominent. Pronotum (Fig. 16) with bigger punctures, distance 1–3 diameters, most punctures with a very short adpressed seta; surface flat and shagreened; lateral margin unbordered; propleures with similar punctation and setation as on disc. Elytra (Fig. 16) with complete rows of punctures without striae, punctures of rows somewhat bigger than punctures on pronotum, punctures without or with a very short adpressed seta; intervals with irregularly scattered small punctures without seta, interval 9 with 3 setiferous pores; all intervals convex and shining. Each femur in both sexes with distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 18.

Remarks: See *Laena rai* n.sp. (4.12.).

Distribution: Central Nepal (Kathmandu Valley).

3.43. *Laena indica* Fairmaire 1896

Type locality: India, Himachal Pradesh, Simla, without altitude data.

Studied type material: India, Simla, without further dates, 1 syntype HNHM (without head, thorax and anterior pair of legs).

New material: India, Simla Distr., collection REITTER, 2 ex. HNHM (1 ex. "cum typo comp." by Dr. KASZAB).

Remarks: See *Laena carinata* Schuster 1926 (3.14.).

Distribution: India (Himachal Pradesh).

3.44. *Laena interrupta* Schuster 1935

Type locality: India, Darjeeling, Ghoom (= Ghum), without altitude data.

Studied type material: None.

New material: India, Darjeeling Distr., Ghum, 2200 m, 6.-17.X.1967 leg. G. TOPÁL, 2 ex. HNHM. – India, Darjeeling Distr., 3 km S Ghum, 12.IV.1967 leg. G. TOPÁL, 5 ex. HNHM, 1 ex. SMNS. – India, Darjeeling Distr., Ghoom-Lopchu, 2000 m, 12.X.1978 leg. C. BESUCHET & I. LÖBL, 1 ex. HNHM. – India, Darjeeling Distr., Tiger Hill, 2500 m, 12. & 27.V.1975 leg. W. WITTMER, 2 ex. HNHM.

Distribution: India (Darjeeling).

3.45. *Laena irregularis* Schuster 1935

Type locality: India, Uttar Pradesh, Chakrata Distr., Bodyar, 8300 ft. (2550 m).

Studied type material: India, Uttar Pradesh, Chakrata Distr., Bodyar, 8300 ft., 3.-12.V.1922 leg. S. N. CHATTERJEE, ♀ holotype BMNH.

New material: Not seen.

Distribution: India (Uttar Pradesh).

3.46. *Laena jumlana* Kaszab 1975 (Figs 136–137)

Type locality: Nepal, Jumla, Sinja Khola, near Chauta, without altitude data.
Studied type material: Nepal, Jumla, "Dampa Pass gegen Chauta" (?= between Dampa Pass and Chauta) (Pa 241), 2.X.1972 leg. H. FRANZ, 1 ♀ paratype HNHM.
New material: Not seen.

Redescription: Body length 5.2 mm. Eyes not prominent. Pronotum (Fig. 136) with big punctures, distance 0.5–3 diameters, most punctures with a short adpressed seta; surface flat and shagreened; lateral margin unbordered; propleures with somewhat sparser punctation and similar setation as on disc. Elytra (Fig. 136) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short adpressed seta; intervals nearly without any punctures except with 2–5 big punctures of similar size bearing each a seta of same length, interval 9 with 3 indistinct setiferous pores; all intervals slightly convex and shining. Each femur in females (males unknown) without distinct tooth. Aedeagus unknown (available only ♀ paratype).
Remarks: See *Laena martinhauseri* n.sp. (4.9.).
Distribution: West Nepal (Jumla).

3.47. *Laena kaliensis* Schuster 1935

Type locality: India, Uttar Pradesh, Kali Valley, Almora, 10500 ft. (3300 m).
Studied type material: India, Uttar Pradesh, Kali Valley, Almora, 10500 ft., 15.VII.1923 leg. R. N. PARKER, holotype BMNH (sex not examined).
New material: Not seen.

Distribution: India (Uttar Pradesh).

3.48. *Laena kangchendzongensis* Masumoto 1990 (Figs 71–73)

Type locality: India, Sikkim, Phithang, 3660 m.
Studied type material: India, Sikkim, Kangchendzonga area, Phithang, 3660 m, 15.IX.1983 leg. S.-I. UÉNO, 1 ♀ paratype HNHM.
New material: Nepal, Taplejung Distr., Simbua Khola, Yalung, 3450 m, 8.IX.1983 leg. J. MARTENS & B. DAAMS, 5 ex. SMNS. – Nepal, Taplejung Distr., Simbua Khola, near Tseram, 3250–3350 m, 10.-15.V.1988 leg. J. MARTENS & W. SCHAWALLER, 31 ex. SMNS, 5 ex. HNHM, 2 ex. BMNH. – Nepal, Taplejung Distr., Simbua Khola, near Yalung, 3450–3700 m, 13.V.1988 leg. J. MARTENS & W. SCHAWALLER, 1 ex. SMNS. – Nepal, Taplejung Distr., Deorali Pass W Yamputhin, 3400 m, 17.V.1988 leg. J. MARTENS & W. SCHAWALLER, 3 ex. SMNS. – Nepal, Taplejung Distr., Lassetham Kharka NW Yamputhin, 3500 m, 6.-9.V.1988 leg. J. MARTENS & W. SCHAWALLER, 2 ex. SMNS.

Redescription: Body length 4.3–5.2 mm. Eyes not prominent. Pronotum (Fig. 71) with small punctures, distance as 2–5 diameters, most punctures with a longer adpressed seta; surface flat and shagreened; lateral margin bordered; propleures nearly without punctures and without setation. Elytra (Fig. 71) with rows of punctures without striae, these rows somewhat diminishing in the posterior part, punctures of rows as big as punctures on pronotum, punctures without or with a short adpressed seta; intervals with scattered distinct punctures bearing each a short seta, interval 9 with 4 distinct setiferous pores; all intervals flat and shining. All

femora in both sexes without distinct tooth but with a feeble keel-like margin (somewhat weaker in the anterior femur). Each tibia in males without distinct sexual character. Aedeagus see Fig. 73 (non-type ♂ from the Simbua Khola Valley).

Remarks: Similar as *Laena espagnoli* from Sikkim, but femora ventrally with keel-like margin and parameres broad with a blunt tip.

Distribution: India (Sikkim), East Nepal (Kangchendzonga).

3.49. *Laena kaszabi* Masumoto 1990 (Figs 61–63)

Type locality: India, Sikkim, Phithang, 3660 m.

Studied type material: India, Sikkim, Kangchendzonga area, Phithang, 3660 m, 15.IX.1983 leg. Y. NISHIKAWA, ♂ holotype NSMT.

New material: Nepal, Taplejung Distr. between Gunsa and Kibla, 3050 m, 11.IX.1983 leg. J. MARTENS & B. DAAMS, 1 ♀ SMNS.

Redescription: Body length 4.8 mm. Eyes not prominent. Pronotum (Fig. 61) with small punctures, distance as 2–6 diameters, most punctures with a longer erect seta; surface flat and shagreened; lateral margin bordered; propleures nearly without punctures and without setation. Elytra (Fig. 61) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a longer erect seta; intervals with a row of small punctures bearing each a seta of same length, interval 9 with 4–5 distinct setiferous pores; all intervals flat and shagreened. Each femur in both sexes with distinct corner. Each tibia in males without sexual character. Aedeagus see Fig. 63.

Remarks: I hope not to fail when assigning the single female from the Nepalese (western) side of the Kangchendzonga to this species. Quite similar is *Laena singalilensis* Masumoto 1990, which can be separated only by a different shape of the aedeagus (Fig. 64). See *Laena yodai* Kaszab 1970 (3.93.) from the Solukhumbu District.

Distribution: India (Sikkim), East Nepal (Kangchendzonga).

3.50. *Laena khumbuana* Kaszab 1977 (Figs 118–120)

Type locality: Nepal, Solukhumbu, Lukla, 2900 m.

Studied type material: Nepal, Solukhumbu Distr., Lughla (=Lukla), 2900 m, 21.-24.X.1970 leg. J. MARTENS, ♂ holotype SMF.

New material: Nepal, Ramechap Distr., Mohabir Khola E Shivalaya, 2500–2600 m, 6.-7.V.1997 leg. W. SCHAWALLER, 1 ex. SMNS. – Nepal, Solukhumbu Distr., above Pangum, 2900–3000 m, 16.V.1997 leg. W. SCHAWALLER, 1 ex. SMNS. – Nepal, Solukhumbu Distr., Nashing Dingma W Surkie La, 2700 m, 20.V.1997 leg. W. SCHAWALLER, 1 ex. SMNS. – Solukhumbu Distr., Sanam, 2700–2800 m, 22.-23.V.1997 leg. W. SCHAWALLER, 3 ex. SMNS. – Nepal, Bhojpur Distr., E Salpa Pass, 3000–2800 m, 24.V.1997 leg. W. SCHAWALLER, 1 ex. SMNS. – Nepal, Sankhua Sabha Distr., S Mansingma, 2300 m, 12.-13.IV.1984 leg. A. SMETANA & I. LÖBL, 3 ex. MHNG, 2 ex. SMNS. – Nepal, Sankhua Sabha Distr., Induwa Khola Valley, 2800 m, 15.IV.1984 leg. A. SMETANA & I. LÖBL, 1 ex. MHNG. – Nepal, Sankhua Sabha Distr., west slope of Goru Dzure Dara, 3600 m, 9.IV.1984 leg. A. SMETANA & I. LÖBL, 1 ex. MHNG.

Redescription: Body length 4.8 mm. Eyes slightly prominent. Pronotum (Fig. 118) with big and confluent punctures, distance below 1 diameter, most punctures with a longer adpressed seta; surface uneven by the confluent punctures and shagreened; lateral margin not pronounced and unbordered; propleures with distinctly sparser punctation and similar setation as on disc. Elytra (Fig. 118) with complete rows of punctures without striae, punctures of rows as big as punctures on

pronotum, most punctures with a longer adpressed seta; intervals with scattered small punctures bearing each a seta of same length, interval 9 posteriorly with 1 distinct setiferous pore; intervals slightly convex, with microganules and shining, alternate intervals 3, 5 and 7 distinctly keel-like, at least partly. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 120.

Distribution: East Nepal (Shivalaya, Khumbu to Khandbari).

3.51. *Laena kuluana* Reitter 1908

Type localities: India, different localities near Kulu, Simla and Pakistan near Muree and Rawalpindi, 7000 ft. (2150 m).

Studied type material: India, Himachal Pradesh, Kulu, ♂ holotype HNHM.

New material: India, Kashmir, 80 km E Srinagar, Kolohoi area, 2500 m, 21.VII.1994 leg. SALK, 1 ex. SMNS.

Distribution: Pakistan (Muree, Rawalpindi), India (Kashmir, Himachal Pradesh).

3.52. *Laena lacordairei* Marseul 1876

Type locality: Northern India.

Studied type material: Not seen.

New material: India, Uttar Pradesh, Chakrata, Kathian, 13.VI.1924 leg. C. F. C. BEESON, 1 ex. HNHM (det. KASZAB).

Distribution: India (? Uttar Pradesh).

3.53. *Laena laevigata* Schuster 1926

Type localities: India, Uttar Pradesh, Chakrata Distr., different localities, 7500–8300 ft. (2300–2550 m).

Studied type material: None.

New material: India, Uttar Pradesh, Dehra Dun, 16.VII.1926, 1 ex. HNHM. – India, Uttar Pradesh, Chaurengi, 2200–2500 m, 23.V.1978 leg. W. WITTMER, 1 ex. HNHM.

Distribution: India (Uttar Pradesh).

3.54. *Laena laevipennis* Schuster 1926

Laena sandakphuensis Masumoto 1990 **n.syn.**

Type localities: India, Sikkim, Tonglu-Phalut, 10000–12000 ft. (3050–3660 m) (*laevipennis*). – India, Darjeeling and Sikkim, different localities, 3020–3950 m (*sandakphuensis*).

Studied type material: India, Sikkim, Tonglu-Phalut, 10000–12000 ft., 1.-7.XI.1920, holotype of *laevipennis* BMNH. – India, Darjeeling, Sandakphu, Singalila Dara, 3620 m, 3.X.1983 leg. Y. NISHIKAWA, 1 paratype of *sandakphuensis* HNHM. – India, Darjeeling, Pasibhanjang, Singalila Dara, 3520 m, 4.X.1983 leg. Y. NISHIKAWA, 1 paratype of *sandakphuensis* HNHM.

New material: India, Darjeeling, Sandakphu, 12.000 ft., 5.V.1934 leg. H. G. CHAMPION, 3 ex. BMNH, 1 ex. SMNS.

Synonymy: The examined paratypes of *sandakphuensis* show not a minute difference to the holotype and description of *laevipennis*, thus *sandakphuensis* Masumoto 1990 is considered as a junior synonym of *laevipennis* Schuster 1926.

Distribution: India (Darjeeling, Sikkim).

3.55. *Laena lamjurensis* Masumoto 1990 (Figs 52–54)

Type locality: Nepal, Solukhumbu, Lamjura Ridge, 2800–3220 m.

Studied type material: Nepal, Solukhumbu Distr., Lamjura Danda, 2800–3220 m, 12.X.1979 leg. Y. NISHIKAWA, ♂ holotype NSMT (head missing).

New material: Not seen.

Redescription: Body length about 6.0 mm. Eyes unknown (head missing). Pronotum (Fig. 52) with small punctures, distance as 3–7 diameters, most punctures with a long erect seta; surface flat and shining; lateral margin unbordered; propleures with sparser punctation as on disc and nearly without setation. Elytra (Fig. 52) with rows of punctures without striae, these rows somewhat diminishing in the posterior part, anterior punctures of rows bigger than those on pronotum, punctures without or with a very short adpressed seta; intervals with a few scattered small punctures bearing each a long erect seta, interval 9 with 3 distinct setiferous pores; all intervals slightly convex and shining. Each femur in males (females unknown) with keel-like margins. Each tibia in males without sexual character. Aedeagus see Fig. 54.

Distribution: Central Nepal (Solukhumbu).

3.56. *Laena longipilis* Schuster 1926 (Figs 89–91)

Laena nepalensis (Jedlička 1965) **n.syn.**

Type localities: India, Sikkim, Tonglu-Phalut and Darjeeling, Gopaldhana, 10000–12000 ft. (3050–3660 m) (*longipilis*). – Nepal, Thodung near Jiri, without altitude data (*nepalensis*).

Studied type material: Nepal, Thodung, 3100 m, 1.-3.VI.1962 leg. G. EBERT, holotype of *nepalensis* ZSM (sex not examined).

New material: Nepal, several localities (KASZAB 1977). – Nepal, many localities from western Nepal (Jumla Distr.) to eastern Nepal (Taplejung Distr.), 2200–3800 m, several specimens HNHM, NKME, SMNS, SMTD.

Redescription: Body length 8.0–11.5 mm. Eyes not prominent. Pronotum (Fig. 89) with big punctures, distance as 1–6 diameters, most punctures with a long erect seta; surface uneven and shining; lateral margin unbordered; propleures with similar punctation and shorter setation as on disc. Elytra (Fig. 89) with rows of punctures without striae, these rows somewhat diminishing in the posterior part, punctures of rows as big as punctures on pronotum, most punctures with a long erect seta; intervals without punctures and without setae exept a few longer erect setae in the humeral region, lateral intervals without distinct setiferous pores; all intervals flat and shagreened. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 91 (non-type ♂ from Thodung, type locality of *nepalensis*).

Synonymy: *Ebertia nepalensis* Jedlička 1965 was described as a new genus and new species of Carabidae and transferred to the genus *Laena* by KASZAB (1970). All specimens from Nepal (including those from the eastern border to Sikkim and Darjeeling, type localities of *longipilis*) fully correspond with the description of *longipilis* and with the holotype of *nepalensis*, thus *Laena nepalensis* (Jedlička 1965) is considered as a junior synonym of *Laena longipilis* Schuster 1926. This synonymy has been already recognized and labelled in HNHM by the late Dr. KASZAB, but not formally published.

Distribution: India (Sikkim, Darjeeling), all Nepal.

3.57. *Laena loricera* Kaszab 1973 (Figs 191–193)

Type locality: Nepal, Gosainkund, Bulumje, 2000–2200 m.

Studied type material: Nepal, Gosainkund, between Sunderijal and Mulkharka (Pa 158), 2000–2200 m, 7.X.1971 leg. H. Franz, ♀ holotype HNHM.

New material: Nepal, Ting Sang La E Barahbise (Kaszab 1977). – Nepal, Dolakha Distr., E Ting Sang La, 3100 m, 12.-13.VI.2000 leg. W. Schawaller, 3 ex. SMNS. – Nepal, Dolakha Distr., Rolwaling Valley, Dugong Kharka, 2700–2900 m, 17.V.2000 leg. J. Schmidt, 1 ex. NKME. – Nepal, Bagmati Prov., below Thare Pati, 3300–3400 m, 10.-13.IV.1981 leg. I. Löbl & A. Smetana, 3 ex. MHNG, 1 ex. HNHM. – Nepal, Bagmati Prov., Mere Dara, 3200 m, 8.IV.1981 leg. I. Löbl & A. Smetana, 2 ex. MHNG. – Nepal, Nuwakot Distr., between Ghopte and Thare Pati, 3150–3250 m, 23.-26.IV.1985 leg. A. Smetana, 19 ex. HNHM, 4 ex. SMNS. – Nepal, Chautara Distr., Choche Ridge, 10500 ft. (3200 m), 12.-17.VI.1983 leg. M. Brendell, 12 ex. BMNH, 2 ex. SMNS. – Nepal, Chautara Distr., Hile Bhanjyang, 11500 ft. (3500 m), 13.-16.VI.1983 leg. M. Brendell, 12 ex. BMNH, 2 ex. SMNS. – Nepal, Chautara Distr., Nauling Lekh, 9500 ft. (2900 m), 11.-20.VI.1983 leg. M. Brendell, 2 ex. BMNH.

Redescription: Body length 4.8–6.2 mm. Eyes slightly prominent. Pronotum (Fig. 191) with small punctures, distance as 2–7 diameters, most punctures with a long erect seta; surface flat and shagreened; lateral margin bordered except shortly before anterior corners; propleures nearly without punctation and without setation. Elytra (Fig. 191) with rows of punctures without striae, these rows somewhat diminishing in the posterior part, anterior punctures of rows bigger than those on pronotum, punctures mostly without setae or rarely with a very short adpressed seta; intervals with a few scattered small punctures bearing mostly no seta, interval 9 with 3 distinct setiferous pores; all intervals slightly convex and shagreened. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 193 (holotype ♀, non-type ♂ from Thare Pati).

Remarks: See *Laena ocys* Kaszab 1973 (3.63.).

Distribution: Central Nepal (Gosainkund to Rolwaling).

3.58. *Laena luprops* Kaszab 1973 (Figs 181–184)

Type locality: Nepal, Gosainkund, Mulkharka to Khoserebas, 1800 m.

Studied type material: Nepal, Gosainkund, Mulkharka to Thare Pati (Pa 153), 1800 m, 5.X.1971 leg. H. Franz, ♀ holotype HNHM.

New material: Nepal, Kathmandu Valley, Phulchoki (Kaszab 1977). – Nepal, Kathmandu Valley, Phulchoki, 8800 ft. (2680 m), 27.-31.V.1983 leg. M. Brendell, 1 ex. BMNH. – Nepal, Kathmandu Valley, Phulchoki, 2475–2700 m, 19.III.1980 leg. J. Martens & A. Ausobsky, 2 ex. SMNS. – Nepal, Solukhumbu Distr., Junbesi, 24.IV.1993 leg. Kleeberg, 1 ex. SMNS. – Nepal, Solukhumbu Distr., Junbesi to Ringmo, 2700–3000 m, 12.V.1997 leg. W. Schawaller, 2 ex. SMNS. – Nepal, Solukhumbu Distr., below Pangum, 2500 m, 14.-15.V.1997 leg. W. Schawaller, 3 ex. SMNS. – Nepal, Solukhumbu Distr., Hinku Drangka Khola Bridge, 2000 m, 18.-19.V.1997 leg. W. Schawaller, 1 ex. SMNS. – Nepal, Solukhumbu Distr., above Bung, 2500–2200 m, 21.V.1997 leg. M. Hauser, 1 ex. SMNS.

Redescription: Body length 3.8–5.0 mm. Eyes prominent. Pronotum (Fig. 182) with big and sometimes with confluent punctures, distance 0.5–2 diameters, most punctures with a short adpressed seta; surface uneven by the confluent punctures and shagreened; lateral margin unbordered in the anterior part and finely bordered in the other parts; propleures with distinctly sparser punctation and similar setation as on disc. Elytra (Fig. 182) with complete but somewhat irregular rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short adpressed seta; intervals with scattered small punctures of same size bearing each a seta of same length, interval 9 with 3 indistinct setiferous pores; all in-

tervals convex and shining, alternate intervals 3, 5 and 7 slightly elevated only in the posterior part. Each femur in both sexes without distinct tooth. Each tibia in males without distinct sexual character. Aedeagus see Fig. 184 (holotype ♀, non-type ♂ from Phulchoki).

Remarks: *Laena luprops* is quite similar as *Laena coniceps*. Both can be separated only by the elytral structure with several big punctures on the intervals in *coniceps* and without any or with a very few very small punctures in *luprops*. Additionally, the alternate intervals are more elevated in *coniceps*. I found no intermediate forms concerning these characters, and therefore I consider both as different species. However, the holotype of *coniceps* is a male and the holotype of *luprops* is a female, thus it cannot be excluded that we face only sexualdimorphic differences.

Distribution: Central Nepal (Kathmandu Valley to Solukhumbu).

3.59. *Laena martensi* Kaszab 1973 (Figs 25–27)

Laena dedita Kaszab 1973 **n.syn.**
Laena zurstrasseni Kaszab 1977 **n.syn.**

Type localities: Nepal, Thodung near Jiri, without altitude data (*martensi*). – Nepal, Jiri, Thodung near Those, 3200 m (*zurstrasseni*). – Nepal, Kathmandu Valley, Phulchoki, 2700 m (*dedita*).

Studied type material: Nepal, Thodung near Jiri, 6.IX.1970 leg. J. MARTENS, 1 ♀ paratype of *martensi* HNHM. – Nepal, Jiri, Thodung near Those, 3200 m, 3.-9.IV.1973 leg. J. MARTENS, ♀ holotype of *zurstrasseni* SMF. – Nepal, Kathmandu, Phulchoki (Pa 15), 2700 m, 9.VIII.1970 leg. H. FRANZ, 1 ♂ paratype of *dedita* HNHM.

New material: Nepal, Kathmandu, Phulchoki (KASZAB 1977 sub *dedita*). – Nepal, Kathmandu, Phulchoki, 2500–2700 m, 19.-22.III.1980 leg. J. MARTENS & A. AUSOBSKY, 5 ex. SMNS. – Nepal, Kathmandu Valley, Phulchoki, 2600–2650 m, 14.V.1980 leg. J. MARTENS & A. AUSOBSKY, 1 ex. SMNS. – Nepal, Kathmandu Valley, Phulchoki, 8800 ft. (2680 m), 27.-31.V.1983 leg. M. BRENDELL, 1 ex. SMNS. – Nepal, Kathmandu Valley, Phulchoki, 2550–2650 m, 19.-22.IV.1982 leg. A. & Z. SMETANA, 13 ex. MHNG, 3 ex. HNHM. – Nepal, Kathmandu Valley, Phulchoki, 2500–2700 m, 28.-29.IV.1984 leg. A. SMETANA & I. LÖBL, 16 ex. MHNG, 4 ex. SMNS. – Nepal, Bagmati Prov., Gul Bhanjyang, 2600 m, 6.IV.1981 leg. I. LÖBL & A. SMETANA, 1 ex. MHNG, 1 ex. HNHM. – Nepal, Bagmati Prov., below Thare Pati, 3300 m, 9.IV.1981 leg. I. LÖBL & A. SMETANA, 1 ex. HNHM. – Nepal, Bagmati Prov., Dobate Ridge NE Barahbise, 2800–3000 m, 3.-7.V.1981 leg. I. LÖBL & A. SMETANA, 3 ex. MHNG. – Nepal, Dolakha Distr., SW Mt. Kalinchok, 3100 m, 19.-23.IV.1995 leg. J. MARTENS & W. SCHAWALLER, 3 ex. SMNS. – Nepal, Dolakha Distr., above Simigau, 2700–2800 m, 1.VI.2000 leg. J. SCHMIDT, 2 ex. NKME. – Nepal, Dolakha Distr., Rolwaling Valley, before Beding, 3300 m, 19.V.2000 leg. J. SCHMIDT, 1 ex. SMNS. – Nepal, Ramechap Distr., Mohabir Khola E Shivalaya, 2500–2600 m, 6.-7.V.1997 leg. W. SCHAWALLER, 1 ex. SMNS.

Redescription: Body length 3.8–5.2 mm. Eyes not prominent. Pronotum (Fig. 25) with big punctures, distance 0.5–3 diameters, most punctures with a longer adpressed seta; surface flat and shagreened; lateral margin pronounced but unbordered; propleures with similar punctation and setation as on disc. Elytra (Fig. 25) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a very short adpressed seta; intervals densely with distinct punctures or with a row of distinct punctures bearing each a seta of same length, interval 9 with 3 distinct setiferous pores; all intervals flat and shagreened. Each femur in both sexes with distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 27 (♂ paratype of *dedita* n.syn.).

Synonymy: *Laena martensi* Kaszab 1973, *dedita* Kaszab 1973 and *zurstrasseni* Kaszab 1977 have been separated by KASZAB (1977) mainly by the "different" dis-

tinct punctation of the elytral intervals (all intervals with dense irregular punctation in *zurstrasseni*, only lateral intervals with irregular punctation in *martensi*, or intervals only with a single row of distinct punctures in *dedita*). All other characters coincide, although the shape of the aedeagus cannot be compared in the types because the descriptions of *martensi* and *zurstrasseni* are based only on females. The new material shows, that the punctation of the elytral intervals as well as those of the elytral rows is variable, thus all 3 taxa are considered as a single species, for which the valid name *martensi* Kaszab 1973 (*dedita* Kaszab 1973 n.syn., *zurstrasseni* Kaszab 1977 n.syn.) is fixed herein. See also *Laena manang* n.sp. (4.8.).

Distribution: Central Nepal (Kathmandu Valley to Shivalaya).

3.60. *Laena merklottoi* Masumoto 1990 (Figs 74–76)

Type localities: India, Sikkim, different localities, 3180–4100 m.

Studied type material: India, Sikkim, Kangchendzonga area, Dzongri, 4100 m, 18.IX.1983 leg. S.-I. Uéno, 1 ♀ paratype HNHM. – India, Sikkim, Dzongri, 3970 m, 18.IX.1983 leg. M. Sakai, 1 ♀ paratype HNHM (both mislabelled as "*merkli*" Masumoto, not Weise).

New material: India, Sikkim, Tadong, 6000–8000 ft. (1850–2450 m), 16.V.1934 leg. H. G. Champion, 1 ex. BMNH. – Nepal, Taplejung Distr., S Gunsa, 3900–3600 m, 10.IX.1983 leg. J. Martens & B. Daams, 2 ex. SMNS. – Nepal, Taplejung Distr., Gunsa, 3100–3400 m, 11.IX.1983 leg. J. Martens & B. Daams, 1 ex. SMNS. – Nepal, Taplejung Distr., Lassetham Kharka, 3000–3300 m, 6.-7.IX.1983 leg. J. Martens & B. Daams, 2 ex. SMNS. – Nepal, Taplejung Distr., Lassetham Kharka, 3500 m, 6.-9.V.1988 leg. J. Martens & W. Schawaller, 4 ex. SMNS, 2 ex. HNHM. – Nepal, Taplejung Distr., ascent to Deorali Pass NW Yamputhin, 2700–3420 m, 16.V.1988 leg. J. Martens & W. Schawaller, 1 ex. SMNS. – Nepal, Taplejung Distr., Deorali Pass NW Yamputhin, 3400 m, 17.V.1988 leg. J. Martens & W. Schawaller, 4 ex. SMNS. – Nepal, Taplejung Distr., descent from Deorali Pass S Hellok, 3400–2800 m, 17.V.1988 leg. J. Martens & W. Schawaller, 2 ex. SMNS. – Nepal, Taplejung Distr., Simbua Khola, Yalung, 3450 m, 8.IX.1983 leg. J. Martens & B. Daams, 2 ex. SMNS. – Nepal, Taplejung Distr., Simbua Khola, near Tseram, 3250–3350 m, 10.-15.V.1988 leg. J. Martens, 6 ex. SMNS, 3 ex. HNHM, 2 ex. BMNH. – Nepal, Taplejung Distr., Simbua Khola, near Yalung, 3450–3700 m, 13.V.1988 leg. J. Martens & W. Schawaller, 6 ex. SMNS. – Nepal, Taplejung Distr., above Walungchung Gola, 3600–3800 m, 21.V.1988 leg. J. Martens & W. Schawaller, 4 ex. SMNS. – Nepal, Taplejung Distr., Ladza Kharka in Ladza Khola NW Walungchung Gola, 4100–4200 m, 21.-23.V.1988 leg. J. Martens & W. Schawaller, 2 ex. SMNS. – Nepal, Sankhua Sabah Distr., lower Kangla Khola E Thudam, 3850–3600 m, 25.V.1988 leg. J. Martens & W. Schawaller, 1 ex. SMNS.

Redescription: Body length 5.0–7.2 mm. Eyes not prominent. Pronotum (Fig. 74) with small punctures, distance as 2–5 diameters, most punctures with a longer adpressed seta; surface flat and shining; lateral margin bordered; propleures with sparser and smaller punctures and shorter setation as on disc. Elytra (Fig. 74) with complete rows of punctures without striae, punctures of rows somewhat bigger than punctures on pronotum, punctures without or with a very short adpressed seta; intervals with a row of scattered small punctures bearing each a short seta, interval 9 with 3 indistinct setiferous pores; all intervals flat and shining. All femora in both sexes with a blunt corner. Anterior tibia in males medially with a distinct tooth, middle tibia strongly bent and medially with a smaller tooth, posterior tibia without modification or medially somewhat swollen. Aedeagus see Fig. 76 (non-type ♂ from the Simbua Khola Valley).

Distribution: India (Sikkim), East Nepal (Kangchendzonga).

3.61. *Laena minuta* Fairmaire 1896

Type locality: India, Himachal Pradesh, Simla, without altitude data.
Studied type material: None.
New material: India, Simla, 1 ex. HNHM (compared with the type by KASZAB). – India, Himachal Pradesh, Simla, Kufri, 16.VII.1989 leg. A. RIEDEL, 1 ex. SMNS. – India, Himachal Pradesh, Rohtang Pass, Mahri, 3300–3600 m, 21.-22.VII.1989 leg. A. RIEDEL, 3 ex. SMNS.

Distribution: India (Himachal Pradesh).

3.62. *Laena nishikawai* Masumoto 1990 (Figs 7–9)

Type locality: India, Sikkim, Choka, 3100–3200 m.
Studied type material: India, Sikkim, Kangchendzonga area, Choka, 3100–3200 m, 14.IX.1983 leg. Y. NISHIKAWA, ♂ holotype NSMT.
New material: Nepal, Taplejung Distr., Lassetham NW Yamputhin, 3000–3500 m, 6.-7.IX.1983 leg. J. MARTENS & B. DAAMS, 5 ex. SMNS. – Nepal, Taplejung Distr., Lassetham NW Yamputhin, 3300–3500 m, 6.-9.V.1988 leg. J. MARTENS & W. SCHAWALLER, 9 ex. SMNS. – Nepal, Taplejung distr, upper Simbua Khola near Tseram, 3250–3350 m, 10.-15.V.1988 leg. J. MARTENS & W. SCHAWALLER, 2 ex. SMNS, 2 ex. HNHM. – Nepal, Taplejung Distr., upper Simbua Khola, 3100–2900 m, 15.V.1988 leg. J. MARTENS & W. SCHAWALLER, 2 ex. SMNS. – Nepal, Taplejung Distr., Deorali Pass W Yamputhin, 3400 m, 17.V.1988 leg. J. MARTENS & W. SCHAWALLER, 4 ex. SMNS, 2 ex. BMNH. – Nepal, Taplejung Distr., Walungchung Gola in upper Tamur Valley, 3000–3200 m, 20.V.1988 leg. J. MARTENS & W. SCHAWALLER, 1 ex. SMNS.

Redescription: Body length 4.8–6.8 mm. Eyes not prominent. Pronotum (Fig. 7) with big punctures, distance as 0.5–1 diameters, most punctures with a short erect seta; surface uneven by the confluent punctation and distinctly shagreened; lateral margin unbordered; propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 7) with rows of punctures without striae, these rows somewhat diminishing in the posterior part, anterior punctures of rows as big as punctures on pronotum, most punctures with a very short adpressed seta; intervals only with few and very small punctures mostly laterally bearing each a short erect seta, interval 9 with 2 distinct setiferous pores (holotype), humeral pore reduced in some non-type specimens); internal intervals flat, alternate intervals 5 and 7 slightly convex, all intervals distinctly shagreened. Each femur in both sexes with a distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 9.
Distribution: India (Sikkim), East Nepal (Kangchendzonga).

3.63. *Laena ocys* Kaszab 1973 (Figs 188–190)

Type locality: Nepal, Kathmandu Valley, Phulchoki, 2700 m.
Studied type material: Nepal, Kathmandu Valley, Phulchoki (Pa 15), 2700 m, 9.VIII.1970 leg. H. FRANZ, ♂ holotype HNHM.
New material: Nepal, Kathmandu Valley, Phulchoki, 2550 m, 29.IV.1984 leg. A. SMETANA & I. LÖBL, 2 ex. MHNG, 1 ex. SMNS.

Redescription: Body length 4.8 mm. Eyes slightly prominent. Pronotum (Fig. 188) with small punctures, distance as 3–8 diameters, most punctures with a long erect seta; surface uneven (?artificially in the holotype) and shagreened; lateral margin bordered except shortly before anterior corners; propleures nearly without punctation and without setation. Elytra (Fig. 188) with rows of punctures without striae, these rows distinctly diminishing in the posterior part, anterior punctures of rows bigger than those on pronotum, punctures mostly without setae or rarely with a very short adpressed seta; intervals with a few scattered small punctures bearing

mostly no seta, interval 9 with 3 distinct setiferous pores; all intervals slightly convex and shagreened. Each femur in males (females unknown) without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 190.

Remarks: It seems not quite sure if *Laena ocys* Kaszab 1973 is a distinct species or identical with *Laena loricera* Kaszab 1973. Most external characters coincide, the only differences are distinctly diminished elytral rows (only somewhat diminished in *loricera*) and shorter joint parameres of the aedeagus (longer in a non-type ♂ of *loricera*, ♀ holotype). So long not further material from the type locality Phulchoki is available to judge the variability I consider both as distinct taxa.

Distribution: Central Nepal (Kathmandu Valley).

3.64. *Laena oedipus* Kaszab 1977 (Figs 77–79)

Type locality: Nepal, N Dhaulagiri, Gompa near Tarakot, 3300–3400 m.

Studied type material: Nepal, N Dhaulagiri, Gompa near Tarakot, 3300–3400 m, 11.-16. V.1970 leg. J. MARTENS, ♂ holotype, 1 ♀ paratype SMF, 1 ♀ paratype HNHM.

New material: Nepal, Myagdi Distr., Myagdi Khola N Dobang, 2800–3100 m, 22.-24. V.1995 leg. J. MARTENS & W. SCHAWALLER, 1 ♀ SMNS.

Redescription: Body length 5.3–6.5 mm. Eyes not prominent. Pronotum (Fig. 77) with small punctures, distance as 3–7 diameters, most punctures with a short adpressed seta; surface flat and shagreened; lateral margin bordered only in the posterior part; propleures with sparser punctation and similar setation as on disc. Elytra (Fig. 77) with complete rows of punctures without striae, punctures of rows somewhat bigger than punctures on pronotum, punctures without setae; intervals without setae exept a few longer erect setae in the humeral region, interval 9 with 3 distinct setiferous pores; all intervals flat and shagreened. Anterior femur in both sexes with a distinct tooth, middle femur with a distinct tooth and an additional smaller opposite tooth, posterior femur with 2 distinct opposite teeth. Middle tibia in males distinctly bent and somewhat S-like, posterior tibia medially in the basal third with a distinct tooth. Aedeagus see Fig. 79.

Remarks: This species is mainly characterized by the distinctly sexualdimorph posterior tibiae in males, thus the identification of the single new female is not quite sure.

Distribution: Central Nepal (Dhaulagiri).

3.65. *Laena opaca* Kaszab 1970 (Figs 4–6)

Laena bikhebhanjangensis Masumoto 1990 **n.syn.**

Type localities: India, Sikkim, Padamtsin to Lingtou, without altitude data (*opaca*). – India, Darjeeling/Sikkim (= West Bengal), Singalila Dara, 3280 m (*bikhebhanjangensis*).

Studied type material: ♀ holotype of *opaca* in collection ARDOIN not seen. – India, Darjeeling/Sikkim, Singalila Dara, Bikhebhanjang, 3280 m, 5. XI.1981 leg. Y. NISHIKAWA, ♀ holotype of *bikhebhanjangensis*.

New material: India, Sikkim, Padamtsin to Lingtou, VII.1901, 1 ex. HNHM (topotype, same label as holotype). – India, Sikkim, Gnatong, VIII.1901, 1 ex. HNHM. – India, Sikkim, Lachen to Lachung, VIII.1933, 1 ex. HNHM. – Nepal, Taplejung Distr., Lassetham NW Yamputhin, 3500 m, 6.-9. V.1988 leg. J. MARTENS & W. SCHAWALLER, 5 ex. SMNS. – Nepal, Taplejung Distr., Hellok in Tamur Valley, 2000 m, 17. V.1988 leg. J. MARTENS & W. SCHAWALLER, 1 ex. SMNS.

Redescription: Body length 7.0–8.0 mm. Eyes not prominent. Pronotum (Fig. 4) with big punctures, distance as 0.5–4 diameters, most punctures with a short

adpressed seta; surface uneven with a pair of feeble impressions on the disc and distinctly shagreened; lateral margin unbordered; propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 4) with rows of punctures without striae, these rows diminishing in the posterior part, anterior punctures of rows as big as punctures on pronotum, most punctures with a very short adpressed seta; intervals only with few and very small punctures mostly laterally bearing each a short erect seta, interval 9 with 3 (topotypic specimen) or 2 (other material) distinct setiferous pores; internal intervals flat, interval 7 convex forming a feeble keel, all intervals distinctly shagreened. Each femur in both sexes with a distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 6 (♀ holotype, non-type ♂ from Hellok).

Synonymy: I can find no distinct differences between the topotypic and other listed material of *opaca* and the single ♀ holotype of *bikhebhanjangensis* from the same area. The type of *bikhebhanjangensis* is a light immature specimen, and the given "differences" (punctation somewhat "stronger", microstructure "less micro-shagreened") are based only on the immature peculiarities and do not represent specific differences. Although the aedeagus cannot be compared (the type of *bikhebhanjangensis* is a ♀) I consider *Laena bikhebhanjangensis* Masumoto 1990 as a junior synonym of *Laena opaca* Kaszab 1970.

Distribution: India (Sikkim), East Nepal (Kangchendzonga).

3.66. *Laena opacicollis* Kaszab 1970 (Figs 115–117)

Laena bembidion Kaszab 1973 **n.syn.**

Type localities: Nepal, Chagma, 2200 m (not localized) (*opacicollis*). – Nepal, Korthali near Barahbise, 1900 m (*bembidion*).

Studied type material: E Nepal, Chagma, 2200 m, 14.VI.1963 leg. K. YODA, ♂ holotype of *opacicollis* HNHM. – Nepal, Barahbise to Ting-Sang-La (Pa 7), 1900 m, 4.VIII.1970 leg. H. FRANZ, ♀ holotype of *bembidion* HNHM.

New material: Nepal, Dolakha Distr., S slope of Khare Khola, 2100 m, 2.VI.2000 leg. W. SCHAWALLER, 5 ex. SMNS. – Nepal, Dolakha Distr., Tama Koshi Valley, Simigau to Chet Chet, 2000–1300 m, 3.VI.2000 leg. J. SCHMIDT, 3 ex. NKME, 1 ex. SMNS. – Nepal, Dolakha Distr., Tama Koshi Valley, Jagat to Chet Chet, 1000–1300 m, 15.V.2000 leg. J. SCHMIDT, 2 ex. NKME, 1 ex. SMNS.

Redescription: Body length 5.0–5.3 mm. Eyes slightly prominent. Pronotum (Fig. 115) nearly without (? ♀) or with a few big punctures, punctures with long and erect setae; surface flat and shagreened; lateral margin distinctly bordered; propleures nearly without punctation and without setation. Elytra (Fig. 115) with rows of punctures in feeble striae, these rows distinctly diminishing in the posterior part, punctures mostly without setae; intervals without punctures, interval 3 posteriorly with a distinct setiferous pore, intervals 3, 5 and 7 basally each with a distinct setiferous pore, interval 9 with 4 distinct setiferous pores; all intervals slightly convex and shagreened. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 117.

Synonymy: *Laena opacicollis* has been described upon a single male and *Laena bembidion* upon a single female. The new material now at hands shows, that the given "differences" (shape of elytra, shape of pronotum) only reflect sexual differences and vary within the above listed populations, thus *bembidion* Kaszab 1973 is considered as a junior synonym of *opacicollis* Kaszab 1970.

Remarks: See *Laena chetri* n.sp. (4.3.), *chomolungma* n.sp. (4.4.), *sagarmatha* n.sp. (4.13.) and *tamang* n.sp. (4.16.).

Distribution: Central Nepal (Barahbise to Rolwaling).

3.67. *Laena orbicollis* Schuster 1926

Type locality: India, Uttar Pradesh, Chakrata, Kanasar, 7050 ft. (2150 m).

Studied type material: India, Uttar Pradesh, Chakrata Distr., Kanasar, 7050 ft., 14.-22.V.1922 leg. S. N. CHATTERJEE, 1 ♂ syntype BMNH, designated herewith as lectotype.

New material: Not seen.

Distribution: India (Uttar Pradesh).

3.68. *Laena parateneta* Kaszab 1973 (Figs 130–132)

Type locality: Nepal, Kathmandu Valley, Phulchoki, 2700 m.

Studied type material: Nepal, Kathmandu Valley, Phulchoki, 2700 m, 21.XI.1970 leg. J. MARTENS, 1 ♀ paratype HNHM.

New material: Nepal, Kathmandu, Phulchoki (KASZAB 1977). – Nepal, Bagmati Prov., Gul Bhanjyang, 2600 m, 6.IV.1981 leg. I. LÖBL & A. SMETANA, 1 ex. MHNG, 1 ex. HNHM. – Nepal, Bagmati Prov., Chaubas, 2600 m, 5.IV.1981 leg. I. LÖBL & A. Smetana, 2 ex. MHNG. – Nepal, Kathmandu Valley, Phulchoki, 19.-22.IV.1982 leg. A. & Z. SMETANA, 5 ex. MHNG. – Nepal, Kathmandu Valley, Phulchoki, 2600–2650 m, 21.-22.III.1980 leg. J. MARTENS & A. AUSOBSKY, 2 ex. SMNS. – Nepal, Kathmandu Valley, Phulchoki, 8800 ft. (2680 m), 27.-31.V.1983 leg. M. BRENDELL, 11 ex. BMNH, 2 ex. SMNS. – Nepal, Kathmandu Valley, Phulchoki, 1800–2000 m, 25.IV.1995 leg. W. SCHAWALLER, 1 ex. SMNS.

Redescription: Body length 3.4–4.5 mm. Eyes not prominent. Pronotum (Fig. 130) with big punctures, distance 0.5–3 diameters, most punctures with a short adpressed seta; surface flat and shining; lateral margin unbordered; propleures with somewhat sparser punctation and similar setation as on disc. Elytra (Fig. 130) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short adpressed seta; intervals particularly in the anterior part with a row of big punctures of similar size bearing each a seta of same length, interval 9 with 3 indistinct setiferous pores; all intervals slightly convex and shining. Each femur in both sexes without distinct tooth. Each tibia in males without distinct sexual character. Aedeagus see Fig. 132 (non-type ♂ from Gul Bhanjyang, available ♀ paratype).

Remarks: See *Laena martinhauseri* n.sp. (4.9.).

Distribution: Central Nepal (Kathmandu Valley to Helambu).

3.69. *Laena parkeri* Schuster 1935

Type locality: India, Bashahr State (N Garhwal), Chini, 9500 ft. (2900 m).

Studied type material: India, Bashahr State, Chini, 9500 ft., V.-VII.1928 leg. R. N. PARKER, holotype BMNH (sex not examined).

New material: Not seen.

Distribution: India (Uttar Pradesh).

3.70. *Laena phithangensis* Masumoto 1990

Laena shunichii Masumoto 1990 **n.syn.**

Type localities: India, W Sikkim, Phithang, 3660–3900 m (*phithangensis*). – India, Darjeeling/Sikkim (= West Bengal), Singalila Dara, 3420 m (*shunichii*).

Studied type material: India, W Sikkim, Kangchendzonga area, Phithang, 3660 m, 15.IX.1983 leg. S.-I. UÉNO, ♂ holotype of *phithangensis* NSMT. – India, West Bengal, Singalila Dara, Pasibhanjang, 3420 m, 4.XI.1981 leg. S.-I. UÉNO, ♂ holotype of *shunichii* NSMT.

New material: Not seen.

Synonymy: The restudied holotypes of both described taxa coincide concerning the body shape, the dull dorsal surface with big confluent punctation on the pronotum, the shape of the eyes, the armed femora and the shape of the aedeagus; both differ only somewhat in body size (5.7 mm in *phithangensis*, 5.0 mm in *shunichii*) and in somewhat more prominent alternate elytral intervals 3, 5 and 7 in *shunichii*. Thus, both specimens represent the same species, for which the valid name *Laena phithangensis* Masumoto 1990 (*Laena shunichii* Masumoto 1990 n.syn.) is fixed herewith. See *Laena sakai* Masumoto 1990, probably also identical.

Distribution: India (Darjeeling, Sikkim).

3.71. *Laena planipennis* Schuster 1926

Type localities: India, Uttar Pradesh, Kumaon Distr., different localities, 8000–12000 ft. (2450–3660 m).

Studied type material: None.

New material: India, Uttar Pradesh, W Almora, Sunderdhunga Valley, 8000–11000 ft., 6.VI.1933 leg. H. G. CHAMPION, 1 ex. BMNH, 1 ex. SMNS. – India, Uttar Pradesh, Kumaon, Dudhatoli, 8000–10000 ft., leg. H. G. CHAMPION, 1 ex. HNHM.

Distribution: India (Uttar Pradesh).

3.72. *Laena pokharana* Kaszab 1973 (Figs 175–178)

Laena silvicola Kaszab 1973 **n.syn.**

Type localities: Nepal, Goropani, 2600–2800 m (*pokharana*). – Nepal, Barahbise, 1750 m (*pokharana*). – Nepal, Gosainkund, Fulung 3800–3900 m (*pokharana*). – Nepal, Gosainkund, Fulung, 3300 m (*silvicola*).

Studied type material: Nepal, from Pokhara to Goropani (Pa 147), 29.IX.1979 leg. H. FRANZ, 1 ♂ paratype of *pokharana* HNHM. – Nepal, Gosainkund, forest below Fulung monastery (Pa 174), 3300 m, 10.X.1971 leg. H. FRANZ, 1 ♂ holotype of *silvicola* HNHM.

New material: Nepal, Jumla and Rara lake, different localities (KASZAB 1975). – Nepal, Mugu Distr., Pass N Ludku, 3500 m, 12.VI.1998 leg. W. SCHAWALLER, 2 ex. SMNS. – Nepal, Jumla Distr., Ghurchi-Lagna Pass, 3500 m, 14.VI.1998 leg. W. SCHAWALLER, 4 ex. SMNS. – Nepal, Jumla Distr., Khali-Lagna Pass, 3500 m, 16.-17.VI.1998 leg. W. SCHAWALLER, 10 ex. SMNS, 2 ex. BMNH. – Nepal, Dolpa/Jumla Distr., Pass NW Chaurikot, 3800 m, 17.V.1995 leg. M. HARTMANN, 3 ex. NKME. – Nepal, Jumla Distr., 10 km E Churta, 3500 m, 5.-6.V.1995 leg. M. HARTMANN, 9 ex. NKME, 3 ex. SMNS. – Nepal, Jumla Distr., Gothichaur Valley, 2900–3800 m, 11.VI.1997 leg. M. HARTMANN, 10 ex. NKME, 3 ex. SMNS. – Nepal, Jumla Distr., Jharjwala, 2600 m, 23.V.1995 leg. M. HARTMANN, 11 ex. NKME, 3 ex. SMNS. – Nepal, Jumla Distr., Maharigaon, 3250 m, 8.-9.VII.1999 leg. A. WEIGEL, 11 ex. NKME, 3 ex. SMNS. – Nepal, Jumla Distr., further different localities, leg. M. HARTMANN, A. WEIGEL, & J. WEIPERT, about 200 ex. NKME. – Nepal, Dailekh Distr., Mabu (= Mabuchin) Pass N Dailekh, 3200–3400 m, 16.VII.1995 leg. D. AHRENS, 1 ex. SMNS. – Nepal, S Dhaulagiri, Dhorpatan (KASZAB 1977). – Nepal, Parbat Distr., between Chitre and Ghandrung, Chitre side of the Pass, 2950–3050 m, 5.V.1980 leg. J. MARTENS & A. AUSOBSKY, 2 ex. SMNS. – Nepal, Parbat Distr., between Deorali and Chitre, 2700 m, 1.-2.V.1995 leg. J. MARTENS & W. SCHAWALLER, 2 ex. SMNS. – Nepal, Parbat Distr., N Ghoropani Pass, 2700–2800 m, 5.-6.X.1983 leg. A. SMETANA & I. LÖBL, 5 ex. MHNG. – Nepal, SE Annapurna, Telbruk Danda, 3200–3700 m, 9.-10.VI.1997 leg. O. JÄGER, 10 ex. SMTD, 4 ex. SMNS. – Nepal, Annapurna, Lamjun Himal, upper Midim Khola, 3700 m, 7.VI.1997 leg. J. SCHMIDT, 1 ex. NKME. – Nepal, Annapurna, Telbruk Danda, 3800 m, 9.VI.1997 leg. J. SCHMIDT, 2 ex. NKME. – Nepal, Annapurna, Taprang Danda, 3300–3500 m, 5.VI.1997 leg. J. SCHMIDT, 1 ex. NKME. – Nepal, Gorkha

Distr., Darondi Khola above Barpak, 3300–3000 m, 11.VIII.1983 leg. J. MARTENS & W. SCHAWALLER, 1 ex. SMNS. – Nepal, Rasuwa Distr., north slope above Syabru, 3600–3800 m, 17.-19.IV.1985 leg. A. SMETANA, 39 ex. HNHM, 6 ex. SMNS. – Nepal, Nuwakot Distr., between Ghopte and Thare Pati, 3150–3250 m, 23.-26.IV.1985 leg. A. SMETANA, 11 ex. HNHM, 2 ex. SMNS.

Redescription: Body length 3.3–4.6 mm. Eyes somewhat prominent. Pronotum (Fig. 175) with smaller punctures, distance as 1–6 diameters, most punctures with a longer erect seta; surface flat and shining; lateral margin bordered; propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 175) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a long erect seta; intervals with a row of small punctures bearing each a seta of same length, interval 9 with 3 distinct setiferous pores; all intervals flat and shining. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Figs 177–178.

Synonymy: The only difference between the studied types of *pokharana* and *silvicola* is a slightly different elytral punctation, and also KASZAB (1973) distinguished both taxa by this character (punctures of elytral rows bigger in *silvicola* and smaller in *pokharana*). This difference is considered herein only as infraspecific variation. Additionally, the joint parameres of the aedeagus of the holotype of *silvicola* are not so long as figured by KASZAB (1977) and of comparable shape as in the paratype of *pokharana*. *Laena pokharana* Kaszab 1973 is fixed herein as the valid name for this taxon (*Laena silvicola* Kaszab 1973 n.syn.).

Remarks: The above listed material shows some variability in the length of the elytral setation and in the shape and punctation of the pronotum. Additionally, the type series of *pokharana* originate from quite different localities and altitudes: Goropani near Pokhara (including holotype), Barahbise and Gosainkund. But at least by morphological characters it seems impossible to distinguish separate populations. Probably, this complex is in a young and dynamic process of specification. Quite similar in dorsal shape, punctation and setation is also *Laena thodunga* with somewhat broader joint parameres and slightly different femora (with feeble keel-like margins), and distributed more eastwards. At the present state of knowledge I avoid to synonymize this taxon too.

Distribution: West and Central Nepal (Jumla to Helambu).

3.73. *Laena prehimalayica* Kaszab 1977 (Figs 157–160)

Laena moodlungensis Masumoto 1990 **n.syn.**

Type localities: Nepal, Kathmandu Valley, Phulchoki, 2500–2700 m (*prehimalayica*). – Nepal, Parbat Distr., Moodlung Khola, 2620 m (*moodlungensis*).

Studied type material: Nepal, Kathmandu Valley, Phulchoki, 2500–2700 m, I.1970 leg. J. MARTENS, ♀ holotype of *prehimalayica* SMF. – Nepal, Parbat Distr., Moodlung Khola Valley, 2620 m, 17.X.1981 leg. S.-I. UÉNO, ♂ holotype of *moodlungensis* NSMT.

New material: Nepal, Kathmandu Valley, Phulchoki, 2600–2650 m, 21.-22.III.1980 leg. J. MARTENS & A. AUSOBSKY, 1 ex. SMNS. – Nepal, Kathmandu Valley, Phulchoki, 2550–2650 m, 13.-15.X.1985 leg. A. SMETANA & I. LÖBL, 21 ex. MHNG, 4 ex. SMNS, 1 ex. HNHM. – Nepal, Kathmandu Valley, Phulchoki, 2550–2650 m, 20.-22.IV.1982 leg. A. & Z. SMETANA, 16 ex. MHNG. – Nepal, S Annapurna, Khopra, 3650–3700 m, 21.V.2001 leg. I. HIRTHE, 1 ex. NKME. – Nepal, S Annapurna, W Mardi Khola, 3450–3550 m, 14.V.2001 leg. I. HIRTHE, 5 ex. NKME, 3 ex. SMNS. – Nepal, Manaslu Himal, upper Bhara Pokhari, 3250 m, 5.III.1999 leg. O. JÄGER, 1 ex. SMTD. – Nepal, Manaslu, Barapokhari Lekh, 23 km NE Besisahar, 3800–4100 m, 13.-14.IX.2000 leg. HETZEL, 2 ex. SMNS. – Nepal, Gorkha Distr.,

Chuling Khola, Djinshi Kharka, 3400 m, 4.-5.VIII.1983 leg. J. MARTENS & W. SCHAWALLER, 3 ex. SMNS. – Nepal, Gorkha Distr., Chuling Khola, Djongshi Kharka, 3050–3400 m, 5. VIII.1983 leg. J. MARTENS & W. SCHAWALLER, 3 ex. SMNS. – Nepal, Gorkha Distr., Chuling Khola, Meme Kharka, 5.-6.VIII.1983 leg. J. MARTENS & W. SCHAWALLER, 1 ex. SMNS. – Nepal, Gorkha Distr., Chuling Khola, S Kalo Pokhari, 7.VIII.1983 leg. J. MARTENS & W. SCHAWALLER, 1 ex. SMNS.

Redescription: Body length 3.5–4.0 mm. Eyes not prominent. Pronotum (Fig. 157) with small punctures, distance as 1–5 diameters, most punctures with a long erect seta; surface flat and shining; lateral margin bordered; propleures with sparser punctation as on disc and nearly without setation. Elytra (Fig. 157) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, punctures without or rarely with a very short adpressed seta; intervals with a few scattered small punctures bearing each a longer erect seta, interval 9 with 3 indistinct setiferous pores; all intervals slightly convex and shining. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Figs 159–160 (♀ holotype, topotypic ♂).

Synonymy: I can find no specific differences between the ♀ holotype of *prehimalayica* and the ♂ holotype of *moodlungensis*, the only given "differences" by MASUMOTO (1990) are the body shape and dorsal punctation. Thus, *moodlungensis* Masumoto 1990 is considered as a junior synonym of *prehimalayica* Kaszab 1977.

Distribution: Central Nepal (Annapurna to Kathmandu Valley).

3.74. *Laena pseudofranzi* Kaszab 1975 (Figs 86–88)

Type localities: Nepal, Jumla, Sinja Khola, without altitude data. – Nepal, Jumla, Maharigaon, different localites, 3500 m.

Studied type material: Nepal, Jumla, Dampelek (Pa 243), ascent from Sinja Khola, 3.X.1972 leg. H. FRANZ, 1 ♂ paratype HNHM.

New material: Nepal, Jumla Distr., Khali-Lagna Pass, 3500 m, 16.-17.VI.1998 leg. W. SCHAWALLER, 3 ex. SMNS. – Nepal, Jumla Distr., Ghurchi-Lagna Pass, 3500 m, 14.VI.1998 leg. W. SCHAWALLER, 4 ex. SMNS. – Nepal, Jumla Distr., Khari (=Khali) Lagna Pass, 3500–3700 m, 23.-24.VI. & 4.VII.1995 leg. D. AHRENS, 3 ex. SMNS. – Nepal, Jumla Distr., Khari Lagna, 3280 m, 21.VI.1999 leg. A. WEIGEL, 1 ex. NKME. – Nepal, Karnali Prov., above Maharigaon, 3300–3400 m, 20.VI.1997 leg. J. WEIPERT, 1 ex. SMNS. – Nepal, Karnali Prov., 20 km NE Jumla, 5 km N Maharigaon, 3700 m, 6.VII.1999 leg. A. WEIGEL, 1 ex. NKME. – Nepal, Jumla Distr., Bumra, Nyowru Khola, 2670 m, 22.VI.1999 leg. E. GRILL, 1 ex. NKME. – Nepal, Karnali Prov., Pahada, 3100–3400 m, 2.VI.1997 leg. J. WEIPERT, 1 ex. SMNS. – Nepal, Karnali Prov., Gotichaur, 2800 m, 12.-13.VI.1997 leg. E. GRILL, 1 ex. NKME. – Nepal, Jumla Distr., Talphi, Maharigaon, 3300 m, 20.VI.1997 leg. A. Weigel, 1 ex. SMNS. – Nepal, Karnali Prov., Dolpo Distr., Kagmara Lekh, 3800 m, 11.V.1995 leg. M. HARTMANN, 1 ex. SMNS. – Nepal, Karnali Prov., SE Churta, 6. & 18.V.1995 leg. J. WEIPERT, 2 ex. NKME.

Redescription: Body length 5.8–7.0 mm. Eyes not prominent. Pronotum (Fig. 86) with small punctures, distance as 2–6 diameters, most punctures with a long adpressed seta; surface flat and shining; lateral margin finely bordered except in anterior quarter; propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 86) with rows of punctures without striae, these rows somewhat diminishing in the posterior part, punctures of rows somewhat bigger than those on pronotum, punctures on disc mostly without and laterally with a short adpressed seta; intervals with a few scattered small punctures bearing at least laterally a seta of same length, interval 9 mostly with 3 distinct setiferous pores (1 paratype has 4 pores on the left and 3 on the right elytron); all intervals flat and shagreened. Anterior femur in both sexes with a weak, middle and posterior femur with a distinct sharp cor-

ner. Anterior tibia in males basally bent, and with a broad and parallel distal part. Aedeagus see Fig. 88.

Remarks: See *Laena consimilis* Kaszab 1973 (3.21.).

Distribution: West Nepal (Jumla to Dolpo).

3.75. *Laena punctatissima* Schuster 1926

Type locality: India, Uttar Pradesh, Kumaon Distr., W Almora, without altitude data.

Studied type material: India, Uttar Pradesh, Kumaon, W Almora Divn. (=Division), XI.1918 leg. H. G. Champion, ♂ holotype BMNH.

New material: Uttar Pradesh, Kumaon, II.1929 leg. H. G. Champion, 1 ex. BMNH.

Distribution: India (Uttar Pradesh).

3.76. *Laena puncticollis* Schuster 1935

Type locality: India, Uttar Pradesh, Kumaon Distr., W Almora, without altitude data.

Studied type material: India, Uttar Pradesh, Kumaon, W Almora Dn. (= Division), V.1919 leg. H. G. Champion, ♂ holotype BMNH.

Remarks: The holotype is a male and not a female as published in the original description.

New material: Not seen.

Distribution: India (Uttar Pradesh).

3.77. *Laena rhododendri* Kaszab 1977 (Figs 164–166)

Type locality: Nepal, Ting Sang La E Barahbise, 3400 m.

Studied type material: Nepal, Ting Sang La above Barabise, 3400 m, 13.-15. IV.1973 leg. J. Martens, ♂ holotype, 1 paratype SMF, 1 paratype HNHM.

New material: Nepal, Bagmati Prov., below Thare Pati, 3300–3500 m, 10.-13. IV.1981 leg. I. Löbl & A. Smetana, 6 ex. MHNG. – Nepal, Bagmati Prov., Mere Dara, 3200 m, 8. IV.1981 leg. I. Löbl & A. Smetana, 2 ex. MHNG. – Nepal, Bagmati Prov., Jangtang Ridge NE Barahbise, 3250 m, 5. V.1981 leg. I. Löbl & A. Smetana, 1 ex. HNHM. – Nepal, Dolakha Distr., E Ting Sang La, 3100 m, 12.-13. VI.2000 leg. W. Schawaller, 3 ex. SMNS. – Nepal, Lapchi Kang Range, Hile Danda, Ting Sang Kharka, 3250 m, 4. IX.1999 leg. J. Schmidt, 1 ex. NKME. – Nepal, Rolwaling Valley, Beding to Na, 3600–4000 m, 14.-15. IX.1999 leg. J. Schmidt, 1 ex. NKME, 1 ex. SMNS. – Nepal, Dolakha Distr., Rolwaling Valley, before Beding, 3300 m, 19. V.2000 leg. J. Schmidt, 2 ex. NKME. – Nepal, Dolakha Distr., Rolwaling Valley, upper Semigau, 3300 m, 28. V.2000 leg. J. Schmidt, 240 ex. NKME, 14 ex. SMNS, 1 ex. BMNH.

Redescription: Body length 5.6–6.0 mm. Eyes not prominent. Pronotum (Fig. 164) with small punctures, distance as 2–7 diameters, most punctures with a long erect seta; surface flat and shagreened; lateral margin bordered; propleures with sparser punctation as on disc and nearly without setation. Elytra (Fig. 164) with rows of punctures without striae, these rows somewhat diminishing in the posterior part, anterior punctures of rows as big as those on pronotum, punctures without setae or rarely with a very short adpressed seta; intervals with a few scattered small punctures bearing each a longer erect seta, interval 9 with 3 distinct setiferous pores; all intervals flat and shagreened. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 166.

Remarks: See *Laena consimilis* Kaszab 1973 (3.21.).

Distribution: Central Nepal (Helambu to Rolwaling).

3.78. *Laena rosti* Reitter 1906

Type localities: India, Kashmir and Simla, without altitude data.

Studied type material: India, Kashmir, leg. ROST, holotype HNHM (sex not examined).
New material: Not seen.

Distribution: India (Kashmir, Himachal Pradesh).

3.79. *Laena sakaii* Masumoto 1990

Type locality: India, Darjeeling/Sikkim (= West Bengal), Singalila Dara, 3350 m.
Studied type material: India, West Bengal, Singarila (= Singalila) Ridge, Thakam, 3350 m, 4.X.1983 leg. M. SAKAI, ♀ holotype NSMT.
New material: Not seen.

Remarks: Doubtful taxon, described only by a single female. Quite similar and probably identical with *Laena phithangensis* Masumoto 1990 (*Laena shunichii* Masumoto 1990 n.syn.) from the same mountain ridge between Nepal and Sikkim/Darjeeling. But relatively small particularly for a female (3.8 mm, males of *phithangensis* 5.0–5.7 mm), and the elytral interval 5 more convex and posteriorly with abrupt and prominent end like in the interval 7 (in *phithangensis* interval 5 only slightly convex without abrupt end, only interval 7 posteriorly with abrupt and prominent end).
Distribution: India (Darjeeling, Sikkim).

3.80. *Laena similis* Schuster 1926

Laena transversicollis Schuster 1926 **n.syn.**

Type localities: India, Uttar Pradesh, Mussoorie, Dhobi Ghat, without altitude data (*similis*). – "India or." (F. BATES), not specified (*transversicollis*).
Studied type material: India, Mussoorie, Dhobi Ghat, 14.IV.1922 leg. M. CAMERON, ♂ holotype of *similis* BMNH. – India or., 81.19, F. BATES, holotype of *transversicollis* BMNH (sex not examined).
New material: Not seen.

Synonymy: When comparing the holotypes of *similis* and *transversicollis*, I could find no distinct specific differences between both specimens, particularly in the striking shape of the pronotum with an excavated lateral margin before the anterior corners and in the punctation of pronotum and elytra. The only difference is a distinct setation with very small punctures on the elytral intervals (not in the elytral rows) in the type of *similis*, which is lacking in the type of *transversicollis*. However, the type of *transversicollis* is not in best condition (therefore I avoid examining the aedeagus), so the lacking of setation on the elytral intervals might be artificial. Thus, both taxa are considered as conspecific, for which the valid name *similis* Schuster 1926 (*transversicollis* Schuster 1926 n.syn.) is herewith fixed. Unfortunately, the type locality of *transversicollis* is unknown, but it seems possible that the collector of this type, F. BATES, visited during his travels also Mussoorie.
Distribution: India (Uttar Pradesh).

3.81. *Laena singalilensis* Masumoto 1990 (Fig. 64)

Type locality: India, Darjeeling/Sikkim (= West Bengal), Singalila Dara, 3410–3600 m.
Studied type material: India, Darjeeling/Sikkim, Singalila Dara, Sandakphu, 3600 m, 2.X.1983 leg. S.-I. UÉNO, ♂ holotype NSMT. – India, Darjeeling/Sikkim, Singarila (= Singalila) Ridge, Pasibhanjang, 3410 m, 4.X.1983 leg. M. SAKAI, 1 ♀ paratype HNHM (mislabelled as "*singaliladarensis*").
New material: Not seen.

Remarks: *Laena singalilensis* is extremely similar to *Laena kaszabi* Masumoto 1990 from the same border area between Nepal and Darjeeling/Sikkim. However, both studied holotypes possess distinctly different aedeagi: parameres blade-like in *kaszabi* (Fig. 63), and nearly rectangular in *singalilensis* (Fig. 64). See *Laena yodai* Kaszab 1970 (3.93.) from the Solukhumbu District.

Distribution: India (Darjeeling, Sikkim).

3.82. *Laena sparsepunctata* Kaszab 1970 (Figs 155–156)

Type locality: E Nepal, Tumba, 2800 m (not localized).

Studied type material: E Nepal, Tumba, 2800 m, 31.V.1963 leg. K. Yoda, ♀ holotype HNHM.

New material: Not seen.

Redescription: Body length 3.8 mm. Eyes not prominent. Pronotum (Fig. 155) with small punctures, distance as 3–6 diameters, some punctures with a longer seta; surface flat and shagreened; lateral margin bordered; propleures with sparser punctation as on disc and without setation. Elytra (Fig. 155) with complete rows of punctures without striae, punctures of rows bigger than punctures on pronotum, punctures without distinct seta; intervals with very few small punctures bearing sometimes a long seta, interval 9 with 4 distinct setiferous pores; all intervals flat and shining. Anterior femur in females (males unknown) nearly unarmed, medial and posterior femora each with a distinct sharp corner. Aedeagus unknown (♀ holotype).

Remarks: See under *Laena chaukiensis* Masumoto 1990 (3.18.).

Distribution: East Nepal (? where).

3.83. *Laena studiosa* Kaszab 1973 (Figs 38–40)

Type locality: Nepal, Gosainkund, Thare Pati, 2900 m.

Studied type material: Nepal, Gosainkund, Mulkharka to Thare Pati (Pa 160), 2900 m, 8.X.1971 leg. H. Franz, ♂ holotype HNHM (aedeagus missing).

New material: Nepal, Bagmati Prov., below Thare Pati, 3500 m, 12.IV.1981 leg. I. Löbl & A. Smetana, 1 ex. MHNG, 1 ex. HNHM. – Nepal, Bagmati Prov., Yangri Ridge, 4200–4350 m, 21.-23.IV.1981 leg. I. Löbl & A. Smetana, 33 ex. MHNG, 8 ex. SMNS, 2 ex. HNHM. – Nepal, Bagmati Prov., Yangri Ridge, 4700–4800 m, 22.IV.1981 leg. I. Löbl & A. Smetana, 1 ex. MHNG. – Nepal, Bagmati Prov., Mere Dara, 3000–3500 m, 7.-12.IV.1981 leg. I. Löbl & A. Smetana, 4 ex. MHNG. – Nepal, Nuwakot Distr., between Ghopte and Thare Pati, 3150–3200 m, 23.-26.IV.1985 leg. A. Smetana, 5 ex. HNHM, 3 ex. SMNS. – Nepal, Rasuwa Distr., 1.5 km NE Bhargu, 2000 m, 12.IV.1985 leg. A. Smetana, 1 ex. HNHM. – Nepal, Rasuwa Distr., Langtang Khola, 1950 m, 13.IV.1985 leg. A. Smetana, 1 ex. HNHM.

Redescription: Body length 3.6–4.8 mm. Eyes not prominent. Pronotum (Fig. 38) with big punctures, distance 0.5–4 diameters, most punctures with a longer adpressed seta; surface somewhat uneven by some confluent punctures and shagreened; lateral margin bordered; propleures with similar punctation and shorter setation as on disc. Elytra (Fig. 38) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a longer adpressed seta; intervals with irregularly scattered small punctures bearing each a seta of same length, interval 9 with 2 indistinct setiferous pores; all intervals flat and shining. Each femur in both sexes with distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 40 (missing in the holotype, topotypic ♂ from Thare Pati).

Distribution: Central Nepal (Gosainkund to Helambu).

3.84. *Laena subalpina* Kaszab 1977 (Figs 46–48)

Type locality: Nepal, S Dhaulagiri, Dhorpatan, 3000–3200 m.

Studied type material: Nepal, S Dhaulagiri, Dhorpatan, 3000–3200 m, IV./V.1970 leg. J. MARTENS, ♂ holotype SMF (aedeagus missing).

New material: Nepal, Myagdi Distr., Dhorpatan, 3500 m, 10.III.1994 leg. D. AHRENS, 2 ex. SMNS.

Redescription: Body length 3.8–4.2 mm. Eyes not prominent. Pronotum (Fig. 46) with big punctures, distance as 1–4 diameters, most punctures with a longer adpressed seta; surface flat and shining; lateral margin bordered; propleures with similar punctation and setation as on disc. Elytra (Fig. 46) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short adpressed seta; intervals with very few scattered small punctures bearing each a seta of same length, interval 9 with indistinct setiferous pores; all intervals slightly convex and shining. Each femur in both sexes with distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 48 (missing in the holotype, from KASZAB 1977).

Distribution: West Nepal (Dhorpatan).

3.85. *Laena subcoeca* Kaszab 1973 (Figs 144–146)

Type locality: Nepal, Chordung near Jiri, 2900–3000 m.

Studied type material: Nepal, Chordung near Jiri, 2900–3000 m, IX.1970 leg. J. MARTENS, ♀ holotype HNHM.

New material: Nepal, Chordung near Jiri (KASZAB 1977). – Nepal, Dolakha Distr., Hanumante Danda, 2850 m, 23.-24.V.2000 leg. W. SCHAWALLER, 2 ex. SMNS.

Redescription: Body length 3.6–3.8 mm. Eyes not prominent, reduced. Pronotum (Fig. 144) with small punctures, distance as 3–6 diameters, some punctures with a longer erect seta; surface flat and shining; lateral margin bordered; propleures with bigger punctures as on disc and without setation. Elytra (Fig. 144) with complete rows of punctures without striae, punctures of rows bigger than punctures on pronotum, most punctures without any seta; intervals with a scattered row of small punctures bearing each a long and erect seta, interval 9 with 4 distinct setiferous pores; all intervals slightly convex and shining. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 146 (non-type ♂ from Hanumante, ♀ holotype).

Distribution: Central Nepal (Jiri).

3.86. *Laena tachysoides* Kaszab 1973 (Figs 152–154)

Type locality: Nepal, Gosainkund, Fulung, 3300 m.

Studied type material: Nepal, Gosainkund, below Fulung (Pa 175), 3300 m, 11.X.1971 leg. H. FRANZ, ♀ holotype HNHM.

New material: Nepal, Bagmati Prov., Dobate Ridge NE Barahbise, 2800–3000 m, 3.-7.V.1981 leg. I. LÖBL & A. SMETANA, 6 ex. MHNG, 1 ex. HNHM. – Nepal, Chautara Distr., Nauling Lekh, 9500 ft. (2900 m), 11.-20.VI.1983 leg. M. BRENDELL, 18 ex. BMNH, 4 ex. SMNS. – Nepal, Kathmandu Valley, Siwapuri (= Sheopuri) Dara, 2300–2450 m, 29.IV. & 3.V.1985 leg. A. SMETANA, 5 ex. HNHM, 2 ex. SMNS. – Nepal, Kathmandu Valley, Sheopuri Range, 1700–2100 m, 25.VI.1988 leg. J. MARTENS & W. SCHAWALLER, 2 ex. SMNS. – Nepal, Kathmandu Valley, Sheopuri Range, 2100–2300 m, 25.VI.1988 leg. J. MARTENS & W.

SCHAWALLER, 20 ex. SMNS, 4 ex. HNHM. – Nepal, Kathmandu Valley, Nagarjung, Jamacok, 1900–2100 m, 18.VIII.1983 leg. J. MARTENS & W. SCHAWALLER, 13 ex. SMNS. – Nepal, Manaslu Himal, Bhara Pokhari, 2100 m, 11.IV.1999 leg. J. SCHMIDT, 1 ex. NKME. – Nepal, Kaski Distr., above Dhumpus, 2100 m, 8.-10.V.1980 leg. J. MARTENS & A. AUSOBSKY, 1 ex. SMNS. – Nepal, Kaski Distr., above Pothana, 2000 m, 27.-29.IV.1995 leg. J. MARTENS & W. SCHAWALLER, 1 ex. SMNS. – Nepal, Annapurna, W Mardi Himal, Khare to Pothana, 1950–2000 m, 10.V.2001 leg. J. SCHMIDT, 1 ex. NKME.

Redescription: Body length 2.8–4.0 mm. Eyes not prominent. Pronotum (Fig. 152) with big punctures, distance as 0.5–5 diameters, most punctures with a long erect seta; surface flat and shining; lateral margin bordered; propleures with sparser punctation as on disc and without setation. Elytra (Fig. 152) with rows of punctures without striae, these rows diminishing in the posterior part, punctures of rows distinctly smaller than punctures on pronotum, punctures without distinct seta or with a long and erect seta (see remarks); intervals with very few small punctures bearing each a long and erect seta, interval 7 in the humeral region with an indistinct setiferous pore, interval 9 with 3 indistinct setiferous pores; all intervals convex and shining. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 154 (♀ holotype, non-type ♂ from Phulchoki).

Remarks: The specimens from Kathmandu/Nagarjung and from the Kaski District have the punctures of the elytral rows with a long and erect seta, all the other specimens including the types have these punctures without setae. All other characters including the shape of the parameres coincide, thus I consider this difference not as species-specific. See also *Laena chaukiensis* Masumoto 1990 (3.18.).

Distribution: Central Nepal (Annapurna to Kathmandu Valley).

3.87. *Laena takolana* Kaszab 1973 (Figs 55–57)

Type locality: Nepal, Thakkhola, Marpha, 3500 m.

Studied type material: Nepal, Takola (=Thakkhola), Ainorasha near Marpha (Pa 120), 3500 m, 22.IX.1971 leg. H. FRANZ, ♂ holotype HNHM.

New material: Nepal, Mustang Distr., Thaksang above Tukche, 3150 m, 26.-29.IV.1980 leg. J. MARTENS & A. AUSOBSKY, 2 ex. SMNS.

Redescription: Body length 4.0–4.2 mm. Eyes not prominent. Pronotum (Fig. 55) with big punctures, distance as 0.5–3 diameters, most punctures with a longer adpressed seta; surface flat and shining; lateral margin unbordered; propleures with wider punctation and similar setation as on disc. Elytra (Fig. 55) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short adpressed seta; intervals with a row of distinct punctures bearing each a seta of same length, lateral intervals without distinct setiferous pores; all intervals slightly convex and shining. Each femur in both sexes with a sharp corner (somewhat weaker in the anterior femur). Each tibia in males without sexual character. Aedeagus see Fig. 57, joint parameres shorter than figured in KASZAB (1977).

Distribution: Central Nepal (Thakkhola).

3.88. *Laena thameogensis* Masumoto 1990 (Figs 49–51)

Type locality: Nepal, Solukhumbu, Thame Og, 3780 m.

Studied type material: Nepal, Solukhumbu Distr., Thame Og, 3780 m, 3.X.1979 leg. S.-I. UÉNO, NSMT.

New material: Not seen.

Redescription: Body length 4.8 mm. Eyes not prominent. Pronotum (Fig. 49) with big punctures, distance 0.5–3 diameters, most punctures with a longer adpressed seta; surface flat and shagreened; lateral margin bordered; propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 49) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short adpressed seta; intervals with a row of scattered punctures bearing each a seta of same length, interval 9 with 3 distinct setiferous pores; all intervals flat and shining. Each femur in both sexes with distinct tooth (somewhat smaller at anterior femur). Each tibia in males without sexual character. Aedeagus see Fig. 51.

Distribution: Central Nepal (Solukhumbu).

3.89. *Laena thodunga* Kaszab 1973 (Figs 68–70)

Type localities: Nepal, Thodung near Jiri, 2900–3000 m.

Studied type material: Nepal, Thodung near Jiri, 6.IX.1970 leg. J. MARTENS, 1 ♂ paratype HNHM. – Nepal, Chordung near Jiri, 2950–3000 m, IX.1970 leg. J. MARTENS, 1 paratype HNHM.

New material: Nepal, Jiri, Thodung near Those (KASZAB 1977). – Nepal, Dolakha Distr., Hanumante Danda, 2850 m, 23.-24.V.2000 leg. W. SCHAWALLER, 6 ex. SMNS. – Nepal, Dolakha Distr., Rolwaling Valley, before Beding, 3300 m, 19.V.2000 leg. J. SCHMIDT, 2 ex. NKME, 1 ex. SMNS. – Nepal, Dolakha Distr., Rolwaling Valley, upper Simigau, 3300 m, 28.V.2000 leg. J. SCHMIDT, 30 ex. NKME, 5 ex. SMNS. – Nepal, Solukhumbu Distr., Goyom above Sete, 3100 m, 10.V.1997 leg. W. SCHAWALLER, 12 ex. SMNS, 2 ex. BMNH.

Redescription: Body length 3.3–4.6 mm. Eyes somewhat prominent. Pronotum (Fig. 68) with smaller punctures, distance as 1–6 diameters, most punctures with a longer erect seta; surface flat and shining; lateral margin bordered; propleures with similar punctation and setation as on disc. Elytra (Fig. 68) with complete rows of punctures without striae, punctures of rows somewhat bigger than punctures on pronotum, most punctures with a long erect seta; intervals with a row of small punctures bearing each a seta of same length, interval 9 with 4 distinct setiferous pores; all intervals flat and shining. Each femur in both sexes without distinct tooth, but middle and posterior femur with a feeble keel-like margin. Each tibia in males without sexual character. Aedeagus see Fig. 70.

Distribution: Central Nepal (Jiri, Rolwaling, western Solukhumbu).

3.90. *Laena tibialis* Schuster 1926

Type locality: India (?), unclear.

Studied type material: Without locality data, leg. BOWRING 63.47* ♀ holotype BMNH.

New material: Not seen.

Remarks: This is a doubtful taxon because of the unclear type locality, the type might have been collected also in China. The single type is a female and not a male as given in the original description. It is similar to *alticola* Blair 1923 from Tibet north of the Everest and also similar to *freudei* Kaszab 1961 from Nepal, but the latter has armed femora.

Distribution: India (?), China (?), unclear.

3.91. *Laena villosa* Schuster 1935

Type locality: India, S Garhwal, Akeswar, without altitude data.
Studied type material: India, S Garhwal, Akeswar, Gauri Dutt. (50–100 miles E Dehra Dun), 16.XII.1923, ♀ holotype BMNH.
New material: Not seen.

Remarks: The single type is a female. In contrary to the original description it has the lateral margin of the pronotum somewhat marked but unbordered.
Distribution: India (Uttar Pradesh).

3.92. *Laena vishnua* Masumoto 1990

Laena kephakensis Masumoto 1990 **n.syn.**

Type localities: India, Darjeeling, Singalila Dara, 3420–3620 m (*vishnua*). – India, Sikkim, Kephak, 3600 m (*kephakensis*).
Studied type material: India, Darjeeling, Pasibhanjang near Sandakphu, 3420 m, 4.XI.1981 leg. M. Sakai, ♂ holotype of *vishnua* NSMT. – India, Sikkim, Kangchendzonga area, Kephak, 3600 m, 15.IX.1983 leg. S. Ae, ♀ holotype of *kephakensis* NSMT.
New material: Not seen.

Synonymy: When comparing the holotypes of both described taxa from the same area near the border to Nepal I cannot find a single specific difference (concerning body size and proportions, punctation, setation, structure of eyes, femora ventrally with 2 ridges forming a furrow). The elytra of the ♀ holotype of *kephakensis* are somewhat rounder than in the ♂ holotype of *vishnua*, but this difference refers only to the sex. Thus, both types represent a single species, for which the valid name *Laena vishnua* Masumoto 1990 (*kephakensis* Masumoto 1990 n.syn.) is fixed herein.
Remarks: The holotype of *vishnua* has 1 humeral and 3 distal setiferous pores on the left elytral interval 9 and 1 humeral and only 2 distal setiferous pores on the right elytral interval 9. The holotype of *kephakensis* has 1 humeral and 3 distal setiferous pores on both elytral intervals 9 (and not 5 as mentioned in the description).
Distribution: India (Darjeeling, Sikkim).

3.93. *Laena yodai* Kaszab 1970 (Figs 13–15)

Type locality: Nepal, Solukhumbu Distr., N Junbesi, Numbur, 3600 m.
Studied type material: Nepal, Numbur, 3600 m, 6.VI.1963 leg. K. Yoda, 1 ♂ paratype HNHM.
New material: Not seen.

Redescription: Body length 3.8–4.4 mm. Eyes not prominent. Pronotum (Fig. 13) with small punctures, distance as 2–4 diameters, most punctures with a longer adpressed seta; surface flat and shagreened; lateral margin unbordered; propleures with similar punctures and similar setation as on disc. Elytra (Fig. 13) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short adpressed seta; intervals with a row of small punctures bearing each a seta of same length or sometimes also a longer and erect seta, interval 9 with 3 distinct setiferous pores; all intervals flat and shining. Each femur in males (females unknown) with distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 15, tip of joint parameres rounder and not acute as figured in Kaszab (1977).

Remarks: Quite similar in body size and shape, particularly with the protruding anterior corners of the pronotum, are *Laena kaszabi* Masumoto 1990 and *Laena singalilensis* Masumoto 1990 from the area south of the Kangchendzonga. Both can be separated from *yodai* by the bordered lateral margin of the pronotum, by nearly unpunctured propleures, by the femora only with distinct corners, and by distinctly different aedeagi. See also *Laena schmidti* n.sp. (4.14.).

Distribution: Central Nepal (Solukhumbu).

4. Descriptions of new species from Nepal

4.1. *Laena annapurna* **n.sp.** (Figs 121–123)

Holotype (♂): Nepal, Kaski Distr., above Pothana, 2000 m, 27.-29.IV.1995 leg. J. Martens & W. Schawaller, SMNS.

Paratypes: Same data as holotype, 4 ex. SMNS.

Etymology: Named after the Annapurna Himal, where on its southern slopes the type locality is situated above Dhumpus.

Description: Body length 3.0–3.6 mm. Eyes prominent. Pronotum (Fig. 121) with big and confluent punctures, distance below 1 diameter, most punctures with a short erect seta; surface uneven by the confluent punctures and shining; lateral margin pronounced by distinct granules but unbordered; propleures with distinctly sparser punctation and similar setation as on disc. Elytra (Fig. 121) with the same irregular punctation as on pronotum without any rows and separated intervals, punctures of elytra as big as punctures on pronotum, most punctures with a short erect seta; lateral part of elytra (no intervals) posteriorly with 2 distinct setiferous pores; surface between punctures shining. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 123.

Diagnosis: To be recognized by the irregular elytral punctation without any rows and intervals, by the crenulated lateral margin of the pronotum, by the prominent eyes, by unarmed femora and by the shape of the aedeagus. *Laena crenulicollis* shares with *annapurna* n.sp. the prominent eyes and the crenulated elytral lateral margin, but has the elytra with distinct rows and intervals, the interval 9 with 3 distinct setiferous pores and a completely different aedeagus. See also *Laena magar* n.sp. (4.7.) and *Laena newar* n.sp. (4.10.).

4.2. *Laena arun* **n.sp.** (Figs 172–174)

Holotype (♂): Nepal, Sankhua Sabha (= Sankhuwasabha) Distr., Arun valley, Furure (=Hurure), 2100 m, 7.XII.1998 leg. M. Hartmann, NKME.

Paratypes: Same data as holotype, 1 ex. NKME, 1 ex. SMNS. – Nepal, Sankhua Sabha Distr., Arun valley, Chichila, 2040 m, 8.XII.1998 leg. M. Hartmann, 2 ex. NKME, 1 ex. SMNS. – Nepal, Sankhua Sabha Distr., Arun valley between Mure and Hurure, 2050–2150 m, 9.-17.VI.1988 leg. J. Martens & W. Schawaller, 1 ♀ SMNS. – Nepal, Sankhua Sabha Distr. (labelled as Khandbari Distr. or Kosi Prov.), S Mansigma, 2200–2250 m, 11.-12.IV.1984 leg. I. Löbl & A. Smetana, 8 ex. MHNG, 4 ex. SMNS. – Nepal, Sankhua Sabha Distr., NE Kuwapani, 2500 m, 12.IV.1982 leg. A. & Z. Smetana, 1 ex. MHNG. – Nepal, Sankhua Sabha Distr., NE Kuwapani, 2250–2400 m, 24.IV.1984 leg. I. Löbl & A. Smetana, 7 ex. MHNG.

Etymology: Named after the river Arun, in whose vicinity the types have been collected.

Description: Body length 4.0–6.0 mm. Eyes not prominent. Pronotum (Fig. 172) with bigger punctures, distance 0.5–4 diameters, most punctures with a

longer adpressed seta; surface flat and shagreened; lateral margin bordered; propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 172) with complete rows of punctures in feeble striae, punctures of rows somewhat smaller than punctures on pronotum, punctures with a longer adpressed seta; intervals with a scattered row of distinct punctures bearing each a seta of same length, interval 9 with 3 distinct setiferous pores; all intervals slightly convex and shagreened. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 174.

Diagnosis: *Laena arun* n.sp. is very similar to *Laena chaukiensis* Masumoto 1990 from the same area, but can be separated by a different shape of the pronotum (widest in the middle, in *chaukiensis* widest near anterior margin), by longer setation on the pronotum, by distinct setation on the elytra, by bigger punctures in the elytral rows and intervals, and by slightly convex elytral intervals. Unfortunately, *chaukiensis* is known only by females, thus the aedeagus cannot be compared. As long as no intermediate forms concerning all these characters are known I consider both as different species. Both can be separated also by a different colour pattern, but this is estimated not as distinct: in *arun* n.sp. all specimens collected in December unicoloured light, the specimens collected in the rainy season in April/June unicoloured dark brown; the holotype of *chaukiensis* dark brown with distinctly separated light lateral margin of the elytra. In the same group belongs *Laena rai* n.sp. with armed femora and different aedeagus as well as *Laena tachysoides* with different aedeagus and different dorsal structure and setation.

4.3. *Laena chetri* **n.sp.** (Figs 105–107)

Holotype (♂): Nepal, Dailekh Distr., Talpokhari S Dailekh, 1800 m, 29.V.1998 leg. W. Schawaller, SMNS.

Paratype: Same data as holotype, 1 ex. SMNS.

Etymology: Named after the Nepalese ethnic group Chetri, settling mainly in the lower belt below 2000 m in all Nepal (but not in the Terai plain).

Description: Body length 5.3–5.8 mm. Eyes somewhat prominent. Pronotum (Fig. 105) irregularly with bigger punctures, distance as 0.5–5 diameters, most punctures without and a few with long erect seta; surface flat and shining; lateral margin bordered; propleures nearly without punctation and without setation as on disc. Elytra (Fig. 105) with complete rows of punctures with feeble striae, punctures of rows smaller than punctures on pronotum, punctures without seta; intervals without punctures except a few big punctures bearing each a long and erect seta, interval 7 in the humeral region with a distinct setiferous pore, interval 9 with 4 distinct setiferous pores; all intervals slightly convex and shining. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 107.

Diagnosis: *Laena chetri* n.sp. belongs to the group around *Laena opacicollis* Kaszab 1970, *chomolungma* n.sp., *limbu* n.sp. and others (see key) because of the additional setiferous pore (beside others) on the interval 7, the laterally bordered pronotum and the unarmed legs, but can be recognized by the shape of the aedeagus, by the shape of the pronotum with bigger punctures and a few long setae, by the punctures in the elytral rows smaller than the punctures on the pronotum and by the nearly naked elytral intervals with only a few but long and erect setae.

4.4. *Laena chomolungma* **n.sp.** (Figs 112–114)

Holotype (♂): Nepal, Kathmandu Valley, Sheopuri Range, 2100–2300 m, 25.VI.1988 leg. J. MARTENS & W. SCHAWALLER, SMNS.

Paratypes: Same data as holotype, 7 ex. SMNS, 2 ex. BMNH. – Nepal, Kathmandu Valley, Sheopuri Range, 1700–2100 m, 25.VI.1988 leg. J. MARTENS & W. SCHAWALLER, 5 ex. SMNS, 2 ex. HNHM. – Nepal, Kathmandu Valley, Phulchoki, 3000 m, 25.VI.1997 leg. E. GRILL, 1 ex. NKME. – Nepal, Kathmandu Valley, Phulchoki, 2000–2300 m, 18.VII.2001 leg. E. GRILL, 1 ex. NKME.

Etymology: Named after Chomolungma, the Tibetan name (= Goddess Mother of the World) for the highest peak of the world, the Mt. Everest.

Description: Body length 3.6–5.0 mm. Eyes slightly prominent. Pronotum (Fig. 112) nearly without punctation and without setation, but with a few additional long and erect setae (sometimes broken) on disc; surface flat and shagreened; lateral margin distinctly bordered; propleures nearly without punctation and without setation. Elytra (Fig. 112) with complete and distinct striae without any punctures (only in the single paratype from Phulchoki with visible punctures in the striae) and without setation; intervals without punctures except setiferous pores: interval 3 posteriorly with a distinct setiferous pore, intervals 3, 5 and 7 basally each with a distinct setiferous pore, interval 9 with 4 distinct setiferous pores, intervals with a few additional setiferous pores but not symmetrical on left and right elytron; all intervals slightly convex and shining. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 114.

Diagnosis: *Laena chomolungma* n.sp. belongs to the group of *Laena opacicollis* and *sagarmatha* n.sp. because of the unarmed legs, the slightly prominent eyes, the disc-like pronotum with distinct lateral border and nearly without punctures, and because of the elytral intervals with distinct additional setiferous pores basally on the intervals 3, 5 and 7 and distally on the interval 3, but can be separated by the distinct elytral striae without any punctures, and by the narrow and acute joint parameres. See also *Laena sagarmatha* n.sp. (4.13.).

4.5. *Laena hartmanni* **n.sp.** (Figs 58–60)

Holotype: (♂): Nepal, Bajura Distr., 19 km W Simikot, Kuwadi Khola, 3500 m, 4.-5.VII.2001 leg. A. KOPETZ, NKME.

Paratypes: Same data as holotype, 2 ex. NKME, 2 ex. SMNS. – Nepal, Bajura Distr., 19 km W Simikot, Kuwadi Khola, 3500 m, 4.VII.2001 leg. A. WEIGEL, 4 ex. NKME. – Nepal, Bajura Distr., 19 km SW Simikot, Kuwadi Khola to Saipal, 3500–3700 m, 4.-5.VII.2001 leg. E. GRILL, 1 ex. NKME. – Nepal, Humla Distr., 13 km S Simikot, NE Malikathan, 3800–3400 m, 8.VII.2001 leg. A. KOPETZ & A. WEIGEL, 6 ex. NKME, 2 ex. SMNS. – Nepal, Humla Distr., 15 km S Simikot, W Malikasthan, 4150 m, 8.VII.2001 leg. A. KOPETZ, 1 ex. NKME. – Nepal, Humla Distr., 20 km W Simikot, 5–6 km SE Chala, 3500–3600 m, 28.VI.2001 leg. A. KOPETZ, 2 ex. NKME.

Etymology: Named after MATTHIAS HARTMANN (Erfurt), stimulating a group of coleopterologists (among them the collectors of this type series) being very active in the remote western Nepal.

Description: Body length 5.8–7.0 mm. Eyes not prominent. Pronotum (Fig. 58) with bigger punctures, distance as 1–5 diameters, most punctures with a shorter adpressed seta; surface flat and shagreened; lateral margin unbordered; propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 58) with complete rows of punctures without striae, punctures of rows as big as those on pronotum,

most punctures with a short adpressed seta; intervals with a few scattered small punctures bearing a seta of same length, interval 9 mostly with 3 distinct setiferous pores (the holotype has 3 pores on the left and 4 on the right elytron); all intervals flat and shagreened. Each femur in both sexes with 2 weak corners. Each tibia in males without sexual character. Aedeagus see Fig. 60.

Diagnosis: *Laena hartmanni* n.sp. shares with *franzi* and *pseudofranzi* the general body size, shape and structure as well as the armed femora, each with a pair of more or less developed distinct corners, but can be separated mainly by a laterally completely unbordered pronotum and particularly by a completely different aedeagus. The aedeagus of *hartmanni* n.sp. is similar as in *rhododendri* from the same species-group, but the latter has completely unarmed femora and the pronotum is laterally distinctly bordered.

4.6. *Laena limbu* **n.sp.** (Figs 101–104)

Holotype (♂): Nepal, Sankhua Sabha Distr., Arun Valley between Mure and Hurure, 2050–2150 m, 9.-17.VI.1988 leg. J. Martens & W. Schawaller, SMNS.

Paratypes: Same data as holotype, 26 ex. SMNS. – Nepal, Sankhua Sabha Distr., Arun Valley, Chichila, 18.-20.VI.1988 leg. J. Martens & W. Schawaller, 17 ex. SMNS, 3 ex. BMNH, 3 ex. HNHM. – Nepal, Sankhua Sabha Distr. (labelled as Kosi Prov.), Chichila S Ahale, 2200 m, 24.IV.1984 leg. I. Löbl & A. Smetana, 4 ex. MHNG. – Nepal, Sankhua Sabha Distr. (labelled as Khandbari Distr.), below Sheduwa, 2100–2550 m, 9.IV.1982 leg. A. & Z. Smetana, 1 ex. HNHM. – Nepal, Sankhua Sabha Distr., NE Kuwapani, 2250–2450 m, 24.IV.1984 leg. A. Smetana & I. Löbl, 10 ex. MHNG. – Nepal, Sankhua Sabha Distr., 2 km E Mangsingma, 1900 m, 19.IV.1984 leg. I. Löbl & A. Smetana, 2 ex. MHNG. – Nepal, Sankhua Sabha Distr., S Mangsingma, 2250 m, 12.IV.1984 leg. I. Löbl & A. Smetana, 6 ex. MHNG. – Nepal, Sankhua Sabha Distr., Arun Valley S Num, 1050 m, 20.IV.1984 leg. I. Löbl & A. Smetana, 7 ex. MHNG. – Nepal, Sankhua Sabha Distr., Induwa Khola Valley, 2000 m, 16.IV.1984 leg. I. Löbl & A. Smetana, 14 ex. MHNG, 5 ex. SMNS. – Nepal, Taplejung Distr., Yamputhin, 1650–1800 m, 26.IV.-1.V.1988 leg. J. Martens & W. Schawaller, 44 ex. SMNS. – Nepal, Taplejung Distr., above Yamputhin, left bank of Kabeli Khola, 1800–2000 m, 27.-29.IV.1988 leg. J. Martens & W. Schawaller, 9 ex. SMNS. – Nepal, Taplejung Distr., SE Yamputhin, 2100–2000 m, 25.IV.1988 leg. J. Martens & W. Schawaller, 1 ex. SMNS. – Nepal, Taplejung Distr., SE Yamputhin to Yamputhin, 2000–1650 m, 26. & 30.IV.1988 leg. J. Martens & W. Schawaller, 2 ex. SMNS. – Taplejung Distr., Worebung Pass, 2000 m, 21.IV.1988 leg. J. Martens & W. Schawaller, 13 ex. SMNS. – Nepal, Panchthar Distr., descent to Hinwa Khola Bridge, 1850–1200 m, 20.IV.1988 leg. J. Martens & W. Schawaller, 1 ex. SMNS. – Nepal, Bhojpur Distr., Dilkharka, 2100 m, 26.V.1997 leg. M. Hauser & W. Schawaller, 6 ex. SMNS. – Nepal, Bhojpur Distr., Valley NW Phedi, 1900 m, 25.V.1997 leg. W. Schawaller, 3 ex. SMNS.

Etymology: Named after the Nepalese ethnic group Limbu, settling mainly in eastern Nepal, where the types have been collected.

Description: Body length 3.0–4.2 mm. Eyes somewhat prominent. Pronotum (Fig. 101) with bigger punctures, distance as 1–4 diameters, most punctures with a long erect seta; surface flat and shining; lateral margin bordered; propleures with sparser punctation and similar setation as on disc. Elytra (Fig. 101) with rows of punctures without striae, these rows diminishing in the posterior part, punctures of rows as big as punctures on pronotum, punctures without seta; intervals with a row of punctures bearing each a long and erect seta, interval 7 in the humeral region with a distinct setiferous pore, interval 9 with 4 distinct setiferous pores; all intervals slightly convex and shining. Each femur in both sexes without distinct tooth. Posterior tibia in males of some populations somewhat swollen medially (Fig. 103), in other populations unmodified. Aedeagus see Fig. 104.

Diagnosis: *Laena limbu* n.sp., *Laena pahakhola* n.sp. and *Laena cardiothorax* Kaszab 1978 are quite similar and share the following characters: Eyes somewhat prominent, pronotum cordiform with bordered lateral margin, elytra with distinct setiferous pores in the interval 9 and with an additional distinct pore in the humeral region of the interval 7, and even the aedeagus with triangular parameres with more or less acute tip. They can be separated mainly by a distinctly different setation on the elytra and by different modification of the posterior legs (see also species key): *Laena pahakhola* n.sp. has long and erect setae in the punctures of the elytral rows and nearly no punctures and no setation in the elytral intervals, and no modifications and no particular setation of the male posterior legs; *Laena limbu* n.sp. has in contrary the punctures of the elytral rows without any setae and the elytral intervals with long and erect setae, and sometimes the posterior male tibia medially somewhat swollen but without distinct setation; and *Laena cardiothorax* has the elytral rows and the intervals with long setae, and posterior male femur and tibia medially unswollen but always with a particular dense and longer setation. The differences in the elytral setation are stable in this group of species and no intermediate forms occur.

Remarks: Obviously, in some populations (? in the more western districts Sankhua Sabha and Bhojpur) of *Laena limbu* n.sp. all males possess medially somewhat swollen posterior tibiae, in other populations all males have unmodified tibiae (as in *pahakhola* n.sp.). In other words: this character reflects not just infraspecific variation but might be a hint for a beginning process of divergent evolution in different geographical areas, but is not considered herein as specific. On the other hand, males of *Laena cardiothorax* possess a long and distinct setation on the posterior femur and tibia, which is always absent in *limbu* n.sp. and *pahakhola* n.sp., thus this character is considered herein as a distinct species character.

4.7. *Laena magar* **n.sp.** (Figs 124–126)

Holotype (♂): Nepal, Dailekh Distr., Talpokhari S Dailekh, 1800 m, 29.V.1998 leg. W. SCHAWALLER, SMNS.

Paratypes: Nepal, Dailekh Distr., N Dailekh, 1600 m, 1.-2.VI.1998 leg. W. SCHAWALLER, 2 ex. SMNS.

Etymology: Named after the Nepalese ethnic group Magar, settling in all midlands of Nepal but mostly in the west, where the types have been collected.

Description: Body length 4.8–6.0 mm. Eyes slightly prominent. Pronotum (Fig. 124) with big and confluent punctures, distance below 1 diameter, most punctures with a shorter seta; surface uneven by the confluent punctures and shining; lateral margin pronounced by distinct granules but unbordered; propleures with sparser punctation and similar setation as on disc. Elytra (Fig. 124) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short adpressed seta; intervals with scattered small punctures bearing each a seta of same length, interval 9 with 3 distinct setiferous pores; all intervals convex and shagreened. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 126.

Diagnosis: *Laena magar* n.sp. shares with *annapurna* n.sp. and *crenulicollis* Kaszab 1977 the roughly punctured pronotum with crenulated or dentate lateral margin and the unarmed legs, but can be separated besides a different aedeagus from *annapurna* n.sp. mainly by elytral rows (irregular punctation in *annapurna* n.sp.)

and by only slightly prominent eyes (very prominent in *annapurna* n.sp.) and from *crenulicollis* mainly by the smaller body size and by shining elytral intervals (dull with distinct microgranules in *crenulicollis*).

4.8. *Laena manang* **n.sp.** (Figs 19–21)

Holotype (♂): Nepal, Manang Distr., Marsyandi Valley, above Bagarchap, 2400 m, 13.-14.IV.1980 leg. J. Martens & A. Ausobsky, SMNS.

Paratypes: Nepal, Manang Distr., Marsyandi Valley, Thimang/Bagarchap, 2550 m, 14.-17.IV.1980 leg. J. Martens & A. Ausobsky, 1 ex. SMNS. – Nepal, Manang Distr., Marsyandi Valley, Thanjok to Chame, 2550 m, 17.IV.1980 leg. J. Martens & A. Ausobsky, 3 ex. SMNS. – Nepal, Manang Distr., 4 km SE Pisang, 3050 m, 26.IX.1983 leg. A. Smetana & I. Löbl, 3 ex. MHNG. – Nepal, Manang Distr., Latha Manang W Bagarchap, 2400 m, 23.IX.1983 leg. A. Smetana & I. Löbl, 1 ex. MHNG.

Etymology: Named after the Nepalese ethnic group Manang, settling mainly in the Marsyandi Valley in central Nepal, where the types have been collected.

Description: Body length 4.7–6.2 mm. Eyes not prominent. Pronotum (Fig. 19) with big punctures, distance 0.5–3 diameters, most punctures with a longer adpressed seta; surface flat and shagreened; lateral margin pronounced but unbordered or finely bordered in the posterior part; propleures with similar punctation and setation as on disc. Elytra (Fig. 19) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a very short adpressed seta; intervals with a scattered row of small punctures bearing each a seta of same length, interval 9 with 3 distinct setiferous pores; all intervals flat and shining. Each femur in both sexes with distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 21.

Diagnosis: *Laena manang* n.sp. is quite similar to *martensi* Kaszab 1973 (*dedita* Kaszab 1973 n.syn., *zurstrasseni* Kaszab 1977 n.syn.) in body size and shape, punctation and setation as well as in the armed femora, but has a completely different aedeagus with broad and short joint parameres, whereas in *martensi* including the newly synonymized taxa the joint parameres are longer and narrower. I consider this difference as specific so long as no specimens with an intermediate shape of the parameres between *manang* n.sp. (central Nepal, Marsyandi) and *martensi* (widely disjunct and more eastern between Kathmandu and Jiri) are known. Similar is also *Laena dampaensis*, but with different aedeagus.

4.9. *Laena martinhauseri* **n.sp.** (Figs 141–143)

Holotype (♂): Nepal, Solukhumbu Distr., Goyom above Sete, 3100 m, 10.V.1997 leg. W. Schawaller, SMNS.

Paratypes: Same data as holotype, 2 ex. SMNS. – Nepal, Solukhumbu Distr., above Pangum, 2900–3000 m, 16.V.1997 leg. W. Schawaller, 3 ex. SMNS. – Nepal, Solukhumbu Distr., E Pangkongma La, 3000 m, 17.V.1997 leg. W. Schawaller, 1 ex. SMNS. – Nepal, Dolakha Distr., Rolwaling Valley, Dugong Kharka, 2700–2900 m, 17.V.2000 leg. J. Schmidt, 1 ex. NKME.

Etymology: Named after Martin Hauser (Urbana/Illinois) for his various supports during our joint field work on the trek from Jiri to Tumlingtar in 1997.

Description: Body length 4.7–5.2 mm. Eyes not prominent. Pronotum (Fig. 141) with big and sometimes with confluent punctures, distance 0.5–2 diameters, very few punctures with a short adpressed seta; surface somewhat uneven by the confluent punctures and shagreened; lateral margin unbordered; propleures with

somewhat sparser punctation and similar setation as on disc. Elytra (Fig. 141) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short adpressed seta; intervals with a dense row of big punctures bearing each a seta of same length, interval 9 with 3 indistinct setiferous pores; all intervals slightly convex and shining. Each femur in both sexes without distinct tooth. Each tibia in males without distinct sexual character. Aedeagus see Fig. 143.

Diagnosis: *Laena martinhauseri* n.sp. belongs to the group around *parateneta* and *jumlana* because of the unarmed legs, the not prominent eyes, and the pronotum with rough and sometimes confluent punctation and without lateral border. Besides a different aedeagus, *Laena parateneta* has a shorter and wider pronotum and rounder elytra, and the elytral intervals bear distinct punctures of similar size as in the rows mostly in the anterior part, whereas *Laena jumlana* has a similar shape of the pronotum and elytra but the elytral intervals have nearly no punctation.

4.10. *Laena newar* **n.sp.** (Figs 133–135)

Holotype (♂): Nepal, Kathmandu Valley, Godwari (= Godawari), 1600 m, 31.III.1984 leg. I. Löbl, MHNG.

Paratypes: Same data as holotype, 2 ex. MHNG, 1 ex. SMNS. – Nepal, Kathmandu Valley, Nagarkot, 12.III.1981 leg. G. de Rougemont, 1 ex. SMNS.

Etymology: Named after the Nepalese ethnic group Newar inhabiting the Kathmandu Valley, where the type localities are located.

Description: Body length 3.8–5.3 mm. Eyes not prominent. Pronotum (Fig. 133) with big and sometimes confluent punctures, distance below 1 diameter, most punctures with a long erect seta; surface uneven by the confluent punctures and shining; lateral margin not pronounced and unbordered; propleures with distinctly sparser punctation and similar setation as on disc. Elytra (Fig. 133) with the same irregular punctation as on pronotum without any rows and separated intervals, punctures of elytra as big as punctures on pronotum, most punctures with a long erect seta; lateral part of elytra (no intervals) with 3 indistinct setiferous pores; surface between punctures shining. Each femur in both sexes without distinct tooth. Each tibia in males without distinct sexual character. Aedeagus see Fig. 135.

Diagnosis: *Laena newar* n.sp. can be recognized by the irregular elytral punctation without any rows and intervals and by the not pronounced and unbordered lateral margin of the pronotum. *Laena irregularis* from Uttar Pradesh (only ♀ holotype known) is similar, but the punctation on the elytra is sparser and partly in rows and the shape of the pronotum is different (widest near anterior corners in *irregularis*, widest in the middle in *newar* n.sp.). *Laena punctatissima* from Uttar Pradesh (♂ holotype) possesses between the irregular elytral punctation 3 distinct keels and the pronotum has nearly parallel lateral margins. *Laena annapurna* n.sp. from Nepal has a similar irregular punctation on the elytra as *newar* n.sp., but the pronotum has a distinct crenulated lateral margin, the lateral part of the elytra bears only posteriorly 2 but very distinct setiferous pores and the eyes are distinctly prominent.

4.11. *Laena pahakhola* **n.sp.** (Figs 98–100)

Holotype (♂): Nepal, Sankhua Sabha Distr., above Pahakhola, 2600–2800 m, 31.V.-3.VI.1988 leg. J. Martens & W. Schawaller, SMNS.

Paratypes: Same data as holotype, 10 ex. SMNS, 2 ex. BMNH, 2 ex. HNHM. – Nepal,

Sankhua Sabha Distr. (labelled as Khandbari Distr.), Induwa Khola Valley, 2000–2150 m, 18.IV.1984 leg. A. SMETANA & I. LÖBL, 23 ex. MHNG, 5 ex. SMNS,

Etymology: Named after the village Pahakhola (=Pakhola) in a side valley of the upper Arun river, where parts of the type series have been collected.

Description: Body length 4.0–5.3 mm. Eyes somewhat prominent. Pronotum (Fig. 98) with bigger punctures, distance as 1–5 diameters, most punctures with a long erect seta; surface flat and shining; lateral margin bordered; propleures only with a few big punctures and nearly without setation. Elytra (Fig. 98) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a long and erect seta; intervals with very few scattered punctures bearing each an erect seta of same length, interval 7 in the humeral region with a distinct setiferous pore, interval 9 with 4 distinct setiferous pores; all intervals slightly convex and shining. Each femur in both sexes without distinct tooth. Each tibia in males without distinct sexual character. Aedeagus see Fig. 100.

Diagnosis: See *Laena limbu* n.sp. (4.6.).

4.12. *Laena rai* **n.sp.** (Figs 34–37)

Holotype (♂): Nepal, Ilam Distr., Mai Pokhari, 2100 m, 31.III.-1.IV.1980 leg. J. MARTENS & A. AUSOBSKY, SMNS.

Paratypes: Same data as holotype, 4 ex. SMNS. – Nepal, Ilam Distr., Mai Pokhari, 2100–2200 m, 25.-27.III.1980 leg. J. MARTENS & A. AUSOBSKY, 2 ex. SMNS. – Nepal, Ilam Distr., Mai Pokhari, 2100–2200 m, 9.-10.IV.1988 leg. J. MARTENS & W. SCHAWALLER, 17 ex. SMNS. – Nepal, Panchthar Distr., upper Mai Majuwa Khola, Dhorpar Kharka, 2700 m, 27.-28.VIII.1983 leg. J. MARTENS & B. DAAMS, 5 ex. SMNS. – Nepal, Panchthar Distr., Dhorpar Kharka, 2700 m, 13.-16.IV.1988 leg. J. MARTENS & W. SCHAWALLER, 9 ex. SMNS. – Nepal, Panchthar Distr., Paniporua, 2300 m, 16.-20.IV.1988 leg. J. MARTENS & W. SCHAWALLER, 10 ex. SMNS, 2 ex. BMNH, 2 ex. HNHM.

Etymology: Named after the Nepalese ethnic group Rai settling in eastern Nepal, where the type localities are located.

Description: Body length 3.5–5.2 mm. Eyes not prominent. Pronotum (Fig. 34) with bigger punctures, distance 0.5–3 diameters, most punctures with a longer adpressed seta; surface flat and shagreened; lateral margin bordered; propleures with sparser punctation and similar setation as on disc. Elytra (Fig. 34) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, punctures bearing a longer adpressed seta; intervals with a row of scattered small punctures bearing a seta of same length, interval 9 with 3 distinct setiferous pores; all intervals slightly convex and shining. Elytra with colour pattern: alternate intervals 1, 3, 5, 7 distally darker, sometimes all intervals dark on disc. Each femur in both sexes with distinct tooth. Each tibia in males without distinct sexual character. Aedeagus see Fig. 36.

Diagnosis: *Laena rai* n.sp. is similar by the body shape and small size, and by the armed femora as *goetzi* Kaszab 1970 (Solukhumbu) and *incomperta* Kaszab 1973 (Kathmandu Valley). *Laena incomperta* has also a similar shape of the aedeagus and 3 setiferous pores on the elytral interval 9, but the pronotum is laterally unbordered and the elytra are nearly without setation; *Laena goetzi* is known only by a single female, thus the aedeagus cannot be compared, and shares with *rai* n.sp. the laterally bordered pronotum, but the elytral interval 9 is without any setiferous pores. *Laena*

arun n.sp. is similar in body size, proportions and dorsal structure, but has unarmed femora and a different aedeagus.

Remarks: The specimens from Dhorpar Kharka and from Paniporua are somewhat bigger in the average and the joint parameres of the aedeagus are somewhat broader (Fig. 37), but all other characters coincide.

4.13. *Laena sagarmatha* **n.sp.** (Figs 108–111)

Holotype (♂): Nepal, Kathmandu Valley, Sheopuri Range, 1700–2100 m, 25.VI.1988 leg. J. MARTENS & W. SCHAWALLER, SMNS.

Paratypes: Nepal, Kathmandu Valley, Sheopuri Range, 2100–2300 m, 25.VI.1988 leg. J. MARTENS & W. SCHAWALLER, 3 ex. SMNS. – Nepal, Kathmandu Valley, Siwapuri (=Sheopuri) Dara, 2300–2520 m, 29.IV.-3.V.1985 leg. A. SMETANA, 9 ex. HNHM. – Nepal, Chautara Distr., Nauling Lekh, 9500 ft., 11.-20.VI.1983 leg. M. J. D. BRENDELL, 2 ex. BMNH. – Nepal, Dolakha Distr., E Ting Sang La, 3100 m, 12.-13.VI.2000 leg. W. SCHAWALLER, 5 ex. SMNS. – Nepal, Dolakha Distr., E Ting Sang La, 2600 m, 10.-11.VI.2000 leg. W. SCHAWALLER, 1 ex. SMNS. – Nepal, Dolakha Distr., Serukapti, 2400 m, 25.V.2000 leg. W. SCHAWALLER, 1 ex. SMNS. – Nepal, Dolakha Distr., Hanumante Danda, 2850 m, 23.-24.V.2000 leg. W. SCHAWALLER, 5 ex. SMNS. – Nepal, Dolakha Distr., Rolwaling Valley, Dugong Kharka, 2700–2900 m, 17.V.2000 leg. J. SCHMIDT, 2 ex. NKME. – Nepal, Dolakha Distr., Rolwaling Valley, above Simigau, 2600 m, 2.VI.2000 leg. J. SCHMIDT, 1 ex. NKME. – Nepal, Dolakha Distr., above Simigau, 2400–2700 m, 1.VI.2000 leg. J. SCHMIDT, 5 ex. NKME, 3 ex. SMNS. – Nepal, Dolakha Distr., above Simigau, 2700–2800 m, 1.VI.2000 leg. J. SCHMIDT, 4 ex. NKME. – Nepal, Dolakha Distr., above Simigau, 2800 m, 2.VI.2001 leg. J. SCHMIDT, 2 ex. NKME. – Nepal, Solukhumbu Distr., above Nunthala, 2500–2300 m, 13.V.1997 leg. W. SCHAWALLER, 1 ex. SMNS. – Nepal, Solukhumbu Distr., Hinku Drangka Khola Bridge, 2000 m, 18.-19.V.1997 leg. W. SCHAWALLER, 4 ex. SMNS. – Nepal, Bhojpur Distr., Valley NW Phedi, 1900 m, 25.V.1997 leg. W. SCHAWALLER, 1 ex. SMNS. – Nepal, Bhojpur Distr., Dilkharka, 2100 m, 26.V.1997 leg. W. SCHAWALLER, 1 ex. SMNS. – Nepal, Sankhua Sabha Distr., Arun Valley between Mure and Hurure, 2050–2150 m, 9.-17.VI.1988 leg. J. MARTENS & W. SCHAWALLER, 5 ex. SMNS. – Nepal, Sankhua Sabha Distr., Chichila S Ahale, 2200 m, 24.IV.1984 leg. I. LÖBL & A. SMETANA, 1 ex. MHNG. – Nepal, Sankhua Sabha Distr., NE Kuwapani, 2250 m, 24.IV.1984 leg. I. LÖBL & A. SMETANA, 1 ex. MHNG. – Nepal, Taplejung Distr., Omje Kharka NW Yamputhin, 2300–2500 m, 1.-6.V.1988 leg. J. MARTENS & W. SCHAWALLER, 7 ex. SMNS, 2 ex. HNHM.

Etymology: Named after Sagarmatha, the Nepalese name for the highest peak of the world, the Mt. Everest.

Description: Body length 6.3–7.5 mm. Eyes slightly prominent. Pronotum (Fig. 108) with very fine and sparse punctation without setation, but with a few additional long and erect setae (sometimes broken) on disc; surface flat and shining; lateral margin distinctly bordered; propleures nearly without punctation and without setation. Elytra (Fig. 108) with rows of punctures in feeble striae, these rows somewhat diminishing in the posterior part, punctures mostly without setae; intervals without punctures, interval 3 posteriorly with a distinct setiferous pore, intervals 5 and 7 basally each with a distinct setiferous pore, interval 9 with 3 distinct setiferous pores; all intervals slightly convex and shining. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Figs 110–111.

Diagnosis: *Laena sagarmatha* n.sp. shares with *Laena opacicollis* (*bembidion* n.syn.) the unarmed legs, the slightly prominent eyes, the disc-like pronotum with distinct lateral border and with very fine and sparse or with only a few bigger punctures, the elytral punctual rows in feeble striae and the distinct additional setiferous pores basally on the intervals 3, 5 and 7 and distally on the interval 3. *Laena sagar-*

matha n.sp. can be recognized by a different shape of the pronotum, by the elytral interval 9 with only 3 distinct setiferous pores (4 in *opacicollis*), by a shining dorsal surface (shagreened in *opacicollis*) and mainly by a different aedeagus with distinctly longer joint parameres. See also *Laena chomolungma* n.sp. (4.4.) from the same group but with distinct elytral striae without any punctures, by a different shape of the pronotum and with narrower acute joint parameres.

4.14. *Laena schmidti* **n.sp.** (Figs 10–12)

Holotype (♂): Nepal, Dolakha Distr., Rolwaling Himal, upper Semigau, 3300 m, 28.V.2000 leg. J. SCHMIDT, NKME.

Paratypes: Same data as holotype, 1 ♂ SMNS.

Etymology: Named after JOACHIM SCHMIDT (Rostock), collector of the type series and other *Laena* species, and specialist of Nepalese Carabidae.

Description: Body length 4.5–5.0 mm. Eyes not prominent. Pronotum (Fig. 10) with small punctures, distance as 2–4 diameters, most punctures with a longer adpressed seta; surface flat and shagreened; lateral margin distinctly bordered; propleures with bigger punctures and similar setation as on disc. Elytra (Fig. 10) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short adpressed seta; intervals with a row of small punctures bearing each a seta of same length, interval 9 with 3 setiferous pores; all intervals flat and shining. Each femur in males (females unknown) with distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 12.

Diagnosis: *Laena schmidti* n.sp. shares with *Laena yodai* from the adjacent Solukhumbu the armed femora, the dorsal structure and setation of the pronotum and elytra, as well as the protruding anterior corners of the pronotum, but both can be separated by a different aedeagus and by a different pronotum (in *schmidti* n.sp. the lateral margin is parallel and distinctly bordered and the tip of the anterior corner is somewhat bent upwards, in *yodai* the lateral margin is rounded and unbordered and the tip of the anterior corner is not bent upwards). *Laena kaszabi* and *Laena singalilensis* have also protruding anterior corners of the pronotum, but the femora are only with a distinct angle and not with a distinct tooth, and the aedeagus of both are different.

4.15. *Laena sherpa* **n.sp.** (Figs 147–149)

Holotype (♂): Nepal, Solukhumbu Distr., E Pangkongma La, 3000 m, 17.V.1997 leg. W. SCHAWALLER, SMNS.

Paratypes: Same data as holotype, 7 ex. SMNS, 1 ex. BMNH, 1 ex. HNHM. – Nepal, Solukhumbu Distr., above Pangum, 2900–3000 m, 16.V.1997 leg. W. SCHAWALLER, 3 ex. SMNS. – Nepal, Sankhua Sabha Distr. (labelled as Khandbari Distr.), Induwa Khola Valley, 2800 m, 15.IV.1984 leg. A. SMETANA & I. LÖBL, 4 ex. MHNG, 1 ex. SMNS. – Nepal, Sankhua Sabha Distr., S Mansingma, 2800 m, 7.IV.1984 leg. A. SMETANA & I. LÖBL, 1 ex. MHNG.

Additional material: Nepal, Bhojpur Distr., E Salpa Pass, 3000–2800 m, 24.V.1997 leg. W. SCHAWALLER, 1♂, 1 ♀ SMNS.

Etymology: Named after the Nepalese ethnic group Sherpa inhabiting besides other regions mainly the Solukhumbu District south of the Mt. Everest, where the holotype has been collected.

Description: Body length 5.0–5.8 mm. Eyes not prominent, reduced. Pronotum (Fig. 147) with smaller punctures of different size, distance as 2–8 diameters, some punctures with a longer erect seta; surface flat and shagreened; lateral margin

bordered except before anterior corners; propleures nearly without punctures and without setation. Elytra (Fig. 147) with complete rows of punctures without striae, punctures of rows bigger than punctures on pronotum, most punctures without any seta; intervals with a scattered row of small punctures bearing sometimes a short and adpressed seta, interval 9 with 4 distinct setiferous pores; all intervals flat convex and shining. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 149.

Diagnosis: *Laena sherpa* n.sp. shares with *Laena subcoeca* the small and somewhat reduced eyes, but can be separated by a different aedeagus, by a bigger body size and by a different shape of the pronotum and of the elytra, by nearly unpunctured propleures, by finer punctures of the elytral rows with wider intervals, and by the lack of long and erect seta on the elytral intervals. *Laena acuticollis* belongs to the same group of species with reduced eyes, but has besides other characters the pronotum with distinct protruding anterior corners, and the aedeagus with triangular joint parameres with an acute tip.

Remarks: Both specimens from the somewhat more eastern located Salpa Pass are not included in the type series, because they are somewhat smaller (about 4.0 mm), have the lateral margin of the pronotum completely unbordered and the pronotum nearly unpunctured, but the aedeagus of the single male is identical with that of the holotype. Thus, their specific identity remains doubtful.

4.16. *Laena tamang* **n.sp.** (Figs 95–97)

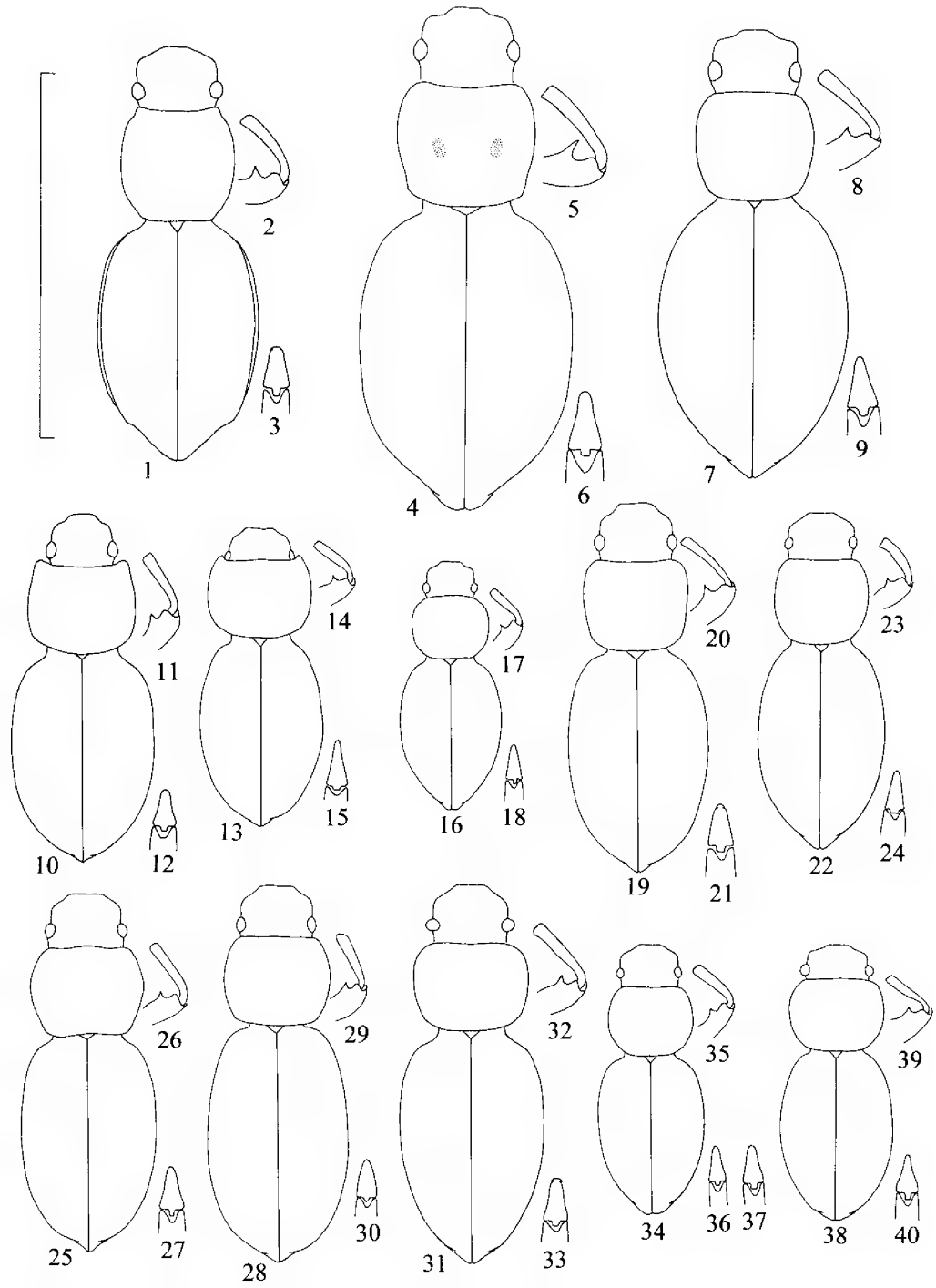
Holotype (♂): Nepal, Bhojpur Distr., E Phedi, Dilkharka, 2100 m, 26.V.1997 leg. M. HAUSER & W. SCHAWALLER, SMNS.

Paratypes: Same data as holotype, 5 ex. SMNS.

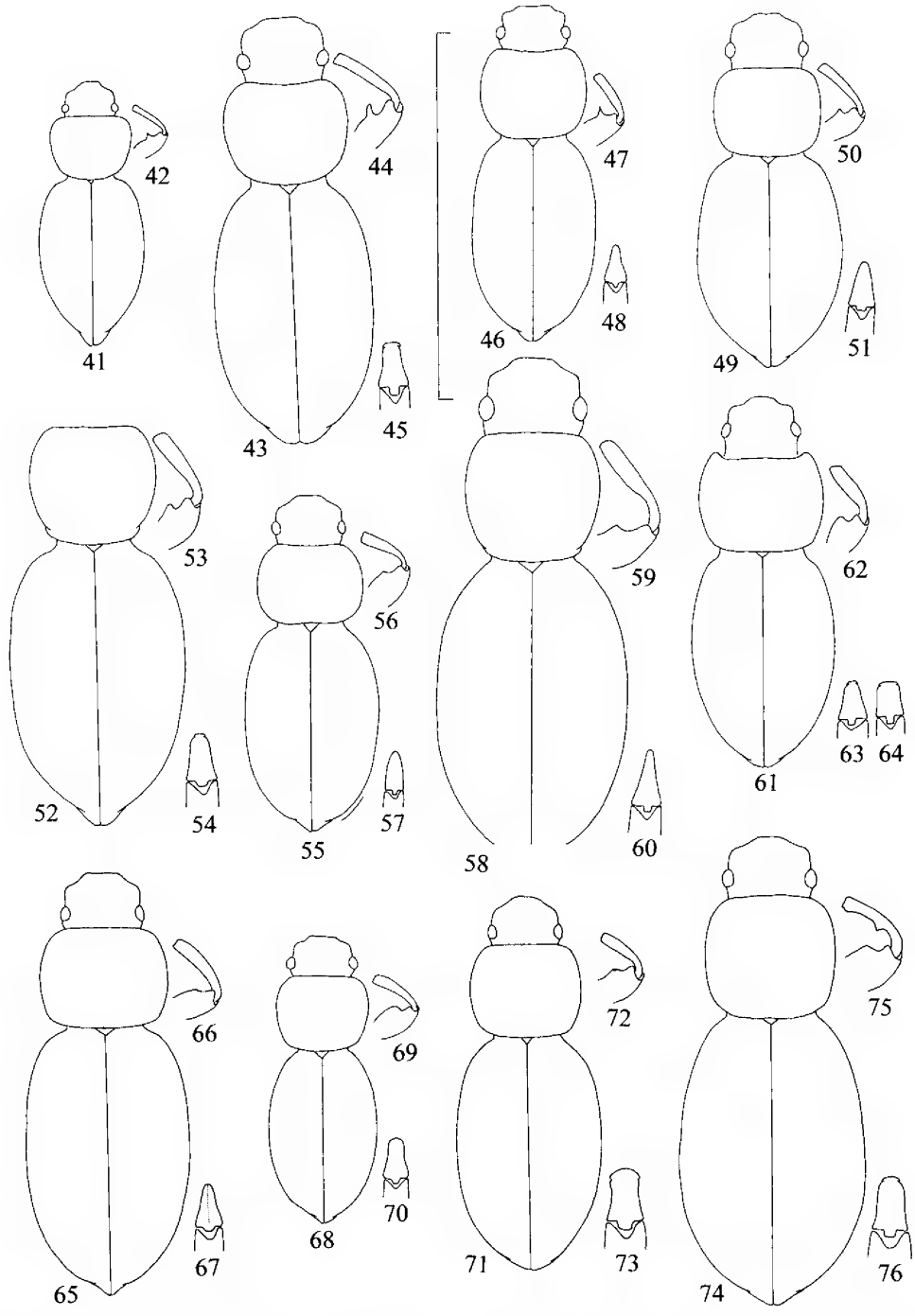
Etymology: Named after the Nepalese ethnic group Tamang, settling mainly in middle Nepal.

Description: Body length 4.8–6.0 mm. Eyes not prominent, somewhat reduced. Pronotum (Fig. 95) with a few scattered small punctures, punctures with a long and erect seta; surface flat and shagreened; lateral margin distinctly bordered; propleures without punctation and without setation. Elytra (Fig. 95) with rows of very small punctures in distinct striae, these rows/striae diminishing posteriorly and laterally, punctures without setae; intervals without punctures except setiferous pores: interval 7 basally with a distinct setiferous pore, interval 9 with 4 distinct setiferous pores, other intervals with a few additional setiferous pores but not symmetrical on left and right elytron; all intervals flat and shagreened. Each femur in both sexes without distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 97.

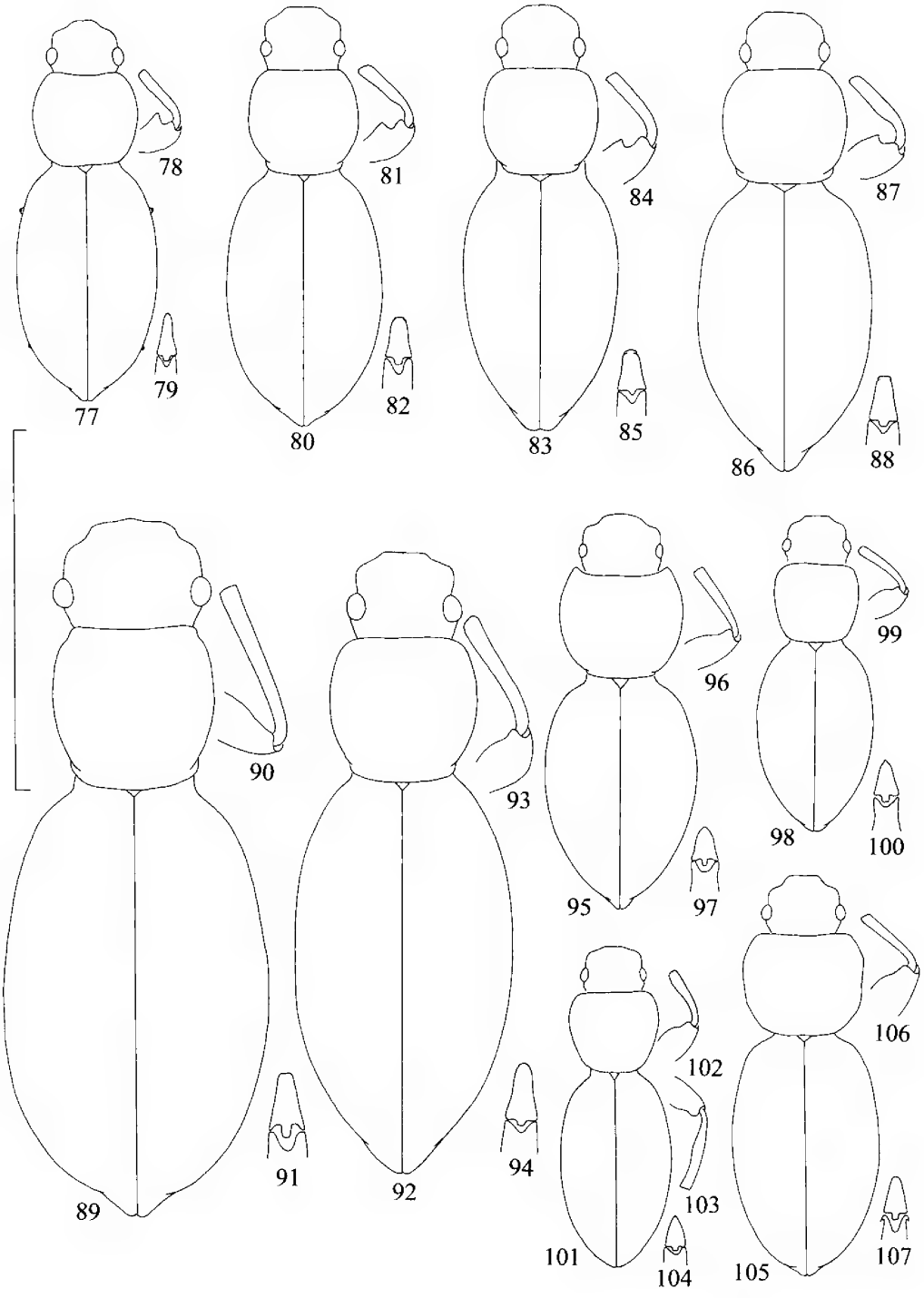
Diagnosis: *Laena tamang* n.sp. shares with *opacicollis* Kaszab 1970, *chomolungma* n.sp., *sagarmatha* n.sp. and other species the disc-like pronotum with distinct lateral border and with unpunctured propleures and the distinct striae on the elytra, but can be separated by somewhat reduced and not prominent eyes, by the prolonged anterior corners of the pronotum, and by the triangular shape of the joint parameres. *Laena acuticollis* from Darjeeling has also reduced eyes and a similar shape of the pronotum with prolonged anterior corners, but the pronotal punctation is distinctly rougher, the elytral intervals bear several long and erect setae and the aedeagus is different.



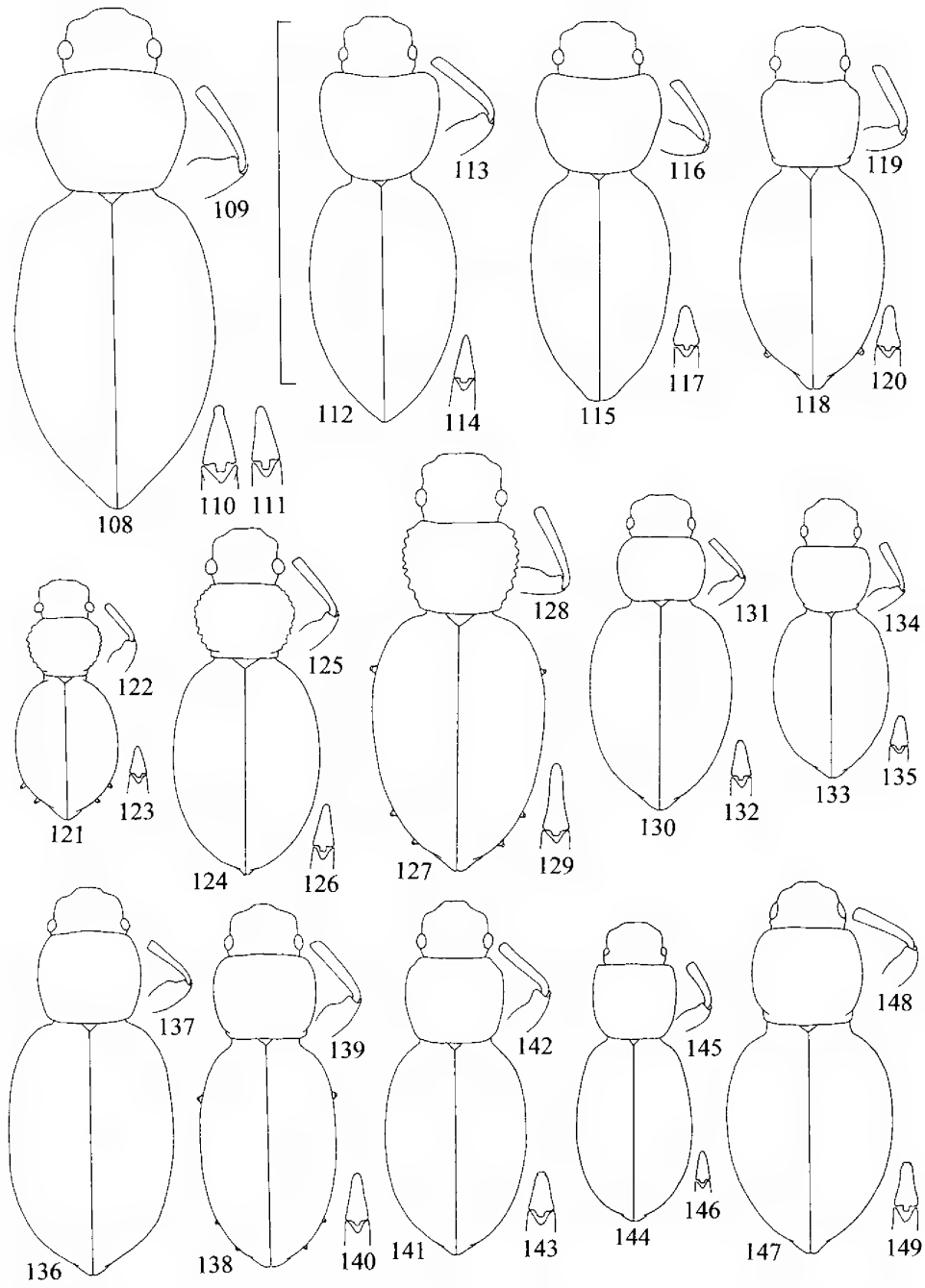
Figs 1–40. Male body shape, anterior femur and tibia, and parameres of the aedeagus of Nepalese *Laena* species. – 1-3. *L. gairibasensis*, holotype; – 4-6. *L. opaca*, non-type from Hellok; – 7-9. *L. nishikawai*, holotype; – 10-12. *L. schmidti* n.sp., holotype, – 13-15. *L. yodai*, paratype; – 16-18. *L. incomperta*, paratype; – 19-21. *L. manang* n.sp., holotype; – 22-24. *L. dampaensis*, non-type from Jumla; – 25-27. *L. martensi*, paratype of *dedita* n.syn.; – 28-30. *L. alpina*, holotype; – 31-33. *L. tamur* n.sp., holotype; – 34-37. *L. rai* n.sp., holotype and paratype from Paniporua (37); – 38-40. *L. studiosa*, holotype and non-type from Thare Pati (40). – Scale: 5.0 mm (body, leg), 2.5 mm (aedeagus).



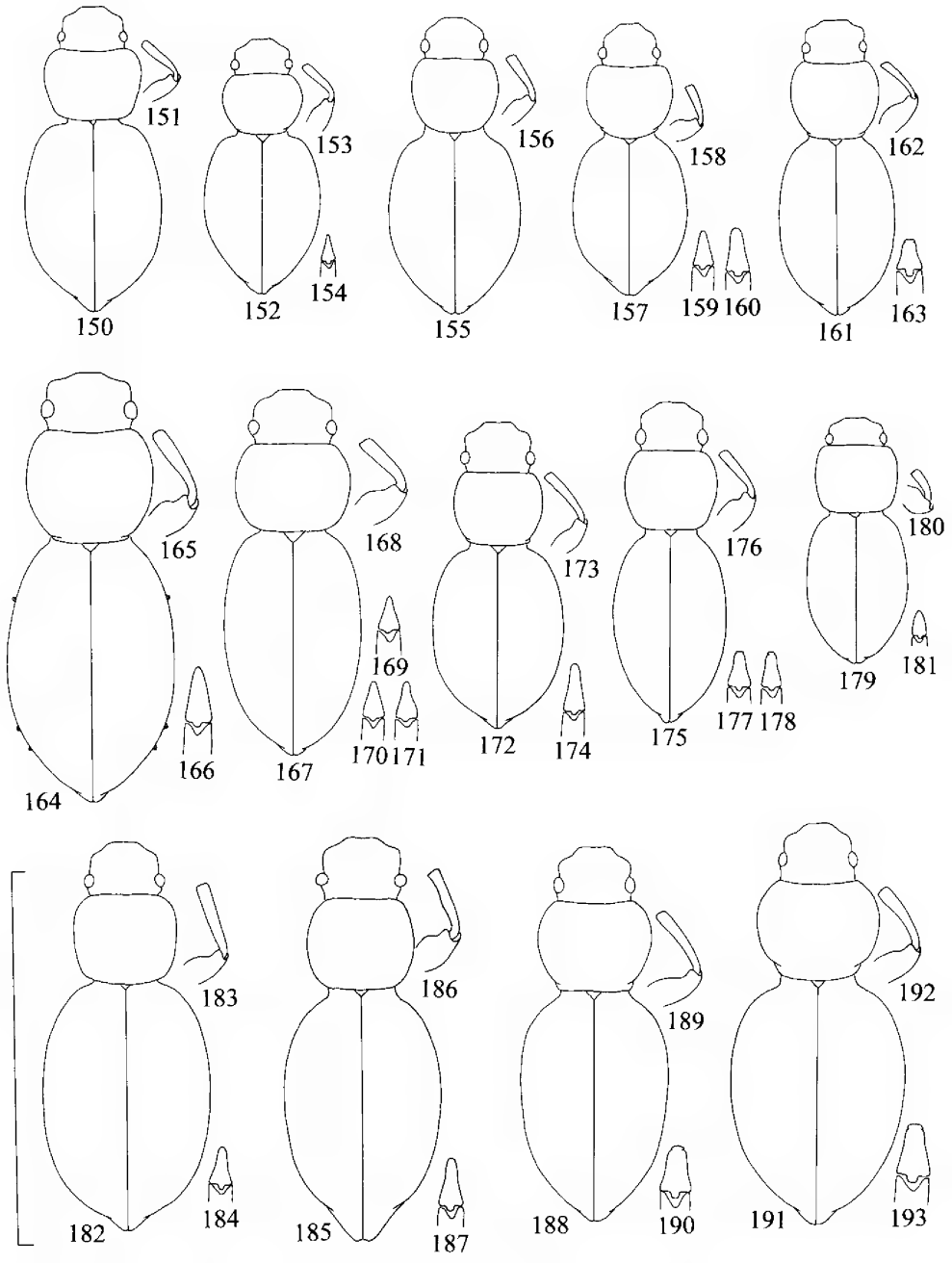
Figs 41–76. Male body shape, anterior femur and tibia, and parameres of the aedeagus of Nepalese *Laena* species. – 41-42. *L. goetzi*, holotype, aedeagus unknown; – 43-45. *L. dentipes*, non-type from Mai Pokhari; – 46-48. *L. subalpina*, holotype, aedeagus from KASZAB (1977); – 49-51. *L. thameogensis*, holotype; – 52-54. *L. lamjurensis*, holotype; – 55-57. *L. takolana*, holotype; – 58-60. L. *hartmanni* n.sp., holotype; – 61-63. *L. kaszabi*, holotype; – 64. *L. singalilensis*, holotype; – 65-67. *L. freudei*, paratype, – 68-70. *L. thodunga*, paratype; – 71-73. *L. kangchendzongensis*, non-type from Simbua Khola; – 74-76. *L. merklottoi*, non-type from Simbua Khola. – Scale: 5.0 mm (body, leg), 2.5 mm (aedeagus).



Figs 77–107. Male body shape, anterior femur and tibia, and parameres of the aedeagus of Nepalese *Laena* species. – 77-79. *L. oedipus*, holotype; – 80-82. *L. consimilis*, paratype; – 83-85. *L. franzi*, paratype; – 86-88. *L. pseudofranzi*, paratype; – 89-91. *L. longipilis*, non-type from Thodung; – 92-94. *L. broscosomoides*, holotype; – 95-97. *L. tamang* n.sp., holotype; – 98-100. *L. pahakhola* n.sp., holotype; – 101-104. *L. limbu* n.sp., holotype; – 105-107. *L. chetri* n.sp., holotype. – Scale: 5.0 mm (body, leg), 2.5 mm (aedeagus).



Figs 108–149. Male body shape, anterior femur and tibia, and parameres of the aedeagus of Nepalese *Laena* species. – 108-111. *L. sagarmatha* n.sp., holotype and paratype from Omje Kharka; – 112-114. *L. chomolungma* n.sp., holotype; – 115-117. *L. opacicollis*, holotype; – 118-120. *L. khumbuana*, holotype; – 121-123. *L. annapurna* n.sp., holotype; – 124-126. *L. magar* n.sp., holotype; – 127-129. *L. crenulicollis*, holotype; – 130-132. *L. parateneta*, paratype and non-type from Gul Bhanjyang (132); – 133-135. *L. newar* n.sp., holotype; – 136-137. *L. jumlana*, aedeagus unknown; – 138-140. *L. dhorpatanica*, holotype, aedeagus from KASZAB (1977); – 141-143. *L. martinhauseri* n.sp., holotype; – 144-146. *L. subcoeca*, holotype and non-type from Hanumante (146); – 147-149. *L. sherpa* n.sp., holotype. – Scale: 5.0 mm (body, leg), 2.5 mm (aedeagus).



Figs 150–193. Male body shape, anterior femur and tibia, and parameres of the aedeagus of Nepalese *Laena* species. – 150-151. *L. chaukiensis*, holotype, aedeagus unknown; – 152-154. *L. tachysoides*, holotype and non-type from Phulchoki (154); – 155-156. *L. sparsepunctata*, holotype, aedeagus unknown; – 157-160. *L. prehimalayica*, holotype and non-type from Phulchoki (159), holotype of *moodlungensis* n.syn. (160); – 161-163. *L. franziana*, non-type from Sheopuri; – 164-166. *L. rhododendri*, holotype; – 167-171. *L. herbertfranzi*, paratype and holotype of *schusteriana* n.syn. (169) and holotype of *augur* n.syn. (171); – 172-174. *L. arun* n.sp., holotype; – 175-178. *L. pokharana*, paratype and holotype of *silvicola* n.syn. (178); – 179-181. *L. fulunga*, paratype of *strigosa* n.syn.; – 182-184. *L. luprops*, holotype and non-type from Phulchoki (184); – 185-187. *L. coniceps*, holotype; – 188-190. *L. ocys*, holotype; – 191-193. *L. loricera*, holotype and non-type from Thare Pati (193). – Scale: 5.0 mm (body, leg), 2.5 mm (aedeagus).

4.17. *Laena tamur* **n.sp.** (Figs 31–33)

Holotype (♂): Nepal, Ilam Distr., Mai Pokhari, 2100 m, 31.III.-1.IV.1980 leg. J. MARTENS & A. AUSOBSKY, SMNS.

Paratypes: Same data as holotype, 1 ex. SMNS. – Nepal, Ilam Distr., Mai Pokhari, 2100–2200 m, 9.-10.IV.1988 leg. J. MARTENS & W. SCHAWALLER, 2 ex. SMNS.

Etymology: Named after the Tamur river, in whose vicinity the types have been collected.

Description: Body length 5.0–5.5 mm. Eyes prominent. Pronotum (Fig. 31) with big and confluent punctures, distance below 0.5 diameter, most punctures with a short adpressed seta; surface somewhat uneven because of the confluent punctation and shagreened; lateral margin bordered; propleures with sparser punctation and similar setation as on disc. Elytra (Fig. 31) with complete rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a very short adpressed seta; intervals with several and dense bigger punctures bearing each a short adpressed seta, interval 9 with 3 distinct setiferous pores; all intervals flat distinctly convex and shagreened. Each femur in both sexes with distinct tooth. Each tibia in males without sexual character. Aedeagus see Fig. 33.

Diagnosis: *Laena tamur* n.sp. is similar to the syntopic *Laena dentipes* Schuster 1935 but can be separated by a different aedeagus with narrower joint parameres, by prominent eyes, by a dense and confluent punctation on the pronotum and by convex elytral intervals with distinct punctation and setation.

5. Identification key for the species of *Laena* in Nepal

This key (compare also figures) may be used only for identification and not for phylogenetic interpretations, it does not include all diagnostic characters and is suitable only for males because of the use of sexual characters. Compare also distribution, listed above.

1 All femora or at least 1 pair of femora ventrally with 1–2 distinct teeth, with sharp corners or with keel like margins **2**
– All femora without any modifications **30**

2 Each femur ventrally with a single but distinct and acute tooth **3**
– Each femur or only 1 pair of femora ventrally with 2 opposite teeth, with sharp corners or with keel like margins **19**

3 Dorsal side distinctly dull, pronotum with big and mostly confluent punctures **4**
– Dorsal side shining, even when surface shagreened, pronotum rarely with confluent and mostly with separate punctures **6**

4 Eyes slightly prominent, elytral intervals 5 and 7 distinctly keel-like and abruptly ending in the posterior quarter of the elytra (Figs 1–3) ..... ***gairibasensis***
– Eyes not prominent, elytral intervals 7 or 5 and 7 only slightly convex, forming a feeble but complete keel **5**

5 Body larger: 7.0–8.0 mm, elytral intervals about 3times wider than punctures of the elytral rows (Figs 4–6) ..... ***opaca***
– Body smaller, 4.8–6.8 mm, elytral intervals at most 2times wider than punctures of the elytral rows (Figs 7–9) ..... ***nishikawai***

6 Anterior corners of pronotum distinctly protruding **7**
– Anterior corners of pronotum rounded or at most rectangular **8**

7 Lateral margin of pronotum unbordered, joint parameres long (Figs 13–15) ..... *yodai*
– Lateral margin of pronotum distinctly bordered, joint parameres triangular (Figs 10–12) . ..... *schmidti* **n.sp.**

8 Lateral margin of pronotum unbordered (sometimes pronounced but unbordered or in a single case finely bordered only in the posterior part 9
– Lateral margin of pronotum distinctly and completely bordered 13

9 Small species: 2.8–3.6 mm, elytra without setation in the rows and intervals (Figs 16–18) . ..... *incomperta*
– Bigger species: 3.8–6.2 mm, elytra with short adpressed setation in the rows and intervals 10

10 Pronotum with nearly straight lateral margins, joint parameres broad and with blunt tip (Figs 19–21) ..... *manang* **n.sp.**
– Pronotum with rounded lateral margins, joint parameres triangular 11

11 Pronotum narrow, at most as wide as long, joint parameres longer (Figs 22–24) .... *dampaensis*
– Pronotum wider than long, joint parameres shorter 12

12 Elytral intervals with distinct irregular or serial punctation, these punctures nearly as big as punctures of the elytral rows (Figs 25–27) ..... *martensi*
– Elytral intervals only with fine serial punctation, these punctures distinctly smaller than punctures of the elytral rows (Figs 28–30) ..... *alpina*

13 Elytral intervals with distinct irregular punctation, intervals wrinkled by these punctation, eyes prominent (Figs 31–33) ..... *tamur* **n.sp.**
– Elytral intervals only with fine serial punctation, eyes not prominent 14

14 Elytral intervals and elytral rows with distinct, longer, adpressed setation 15
– Elytral intervals and elytral rows without or only with very short, nearly invisible setation 16

15 Elytra with yellow-brown colour pattern, elytral intervals slightly convex, interval 9 with 3 distinct setiferous pores (Figs 34–37) ..... *rai* **n.sp.**
– Elytra unicoloured brown, elytral intervals flat, interval 9 with 2 indistinct setiferous pores (Figs 38–40) ..... *studiosa*

16 Pronotum widest in the anterior third 17
– Pronotum widest in the middle 18

17 Small species: 3.5 mm, interval 9 without distinct setiferous pores, aedeagus unknown (Figs 41–42) ..... *goetzi*
– Bigger species: 4.0–6.0 mm, interval 9 with 3 distinct setiferous pores, joint parameres with blunt tip (Figs 43–45) ..... *dentipes*

18 Elytral intervals slightly convex and nearly without punctures and setation, interval 9 with indistinct setiferous pores, joint parameres narrower (Figs 46–48) ..... *subalpina*
– Elytral intervals flat and with distinct serial punctures with short adpressed setae, interval 9 with 3 distinct setiferous pores, joint parameres broader (Figs 49–51) .... *thameogensis*

19 Lateral margin of pronotum completely unbordered 20
– Lateral margin of pronotum completely bordered or at least in the posterior part bordered 22

20 Pronotum with fine punctation, distance of punctures as 3–7 diameters, elytral intervals with few but long and erect setae, joint parameres with blunt tip (Figs 52–54) *lamjurensis*
– Pronotum with denser punctation, distance of punctures as 0.5–5 diameters, elytral intervals with short adpressed setae, joint parameres triangular 21

21 Small species: 4.0–4.2 mm, elytral intervals slightly convex, lateral intervals without distinct setiferous pores (Figs 55–57) ..... *takolana*

– Bigger species: 5.8–7.0 mm, elytral intervals flat, interval 9 with 3–4 distinct setiferous pores (Figs 58–60) ..... ***hartmanni* n.sp.**

22 Lateral margin of pronotum completely bordered **23**
– Lateral margin of pronotum bordered only in the posterior part **27**

23 Anterior corner of pronotum protruding (Figs 61–63) ..... ***kaszabi***
– Anterior corner of pronotum rounded or at most rectangular **24**

24 Anterior femur ventrally without or with weaker modification than in middle and posterior legs **25**
– Ventral modifications of the femora equal in all legs **26**

25 Bigger species: 4.5–6.0 mm, anterior femur with a blunt corner, middle and posterior femora with distinct tooth, punctures of the elytral intervals with a short and adpressed seta, lateral elytral intervals without distinct setiferous pores (Figs 65–67) ..... ***freudei***
– Smaller species: 3.3–4.6 mm, anterior femur with feeble and middle and posterior femora with distinct keel-like margins, punctures of the elytral intervals with a long and erect seta, elytral interval 9 with 4 distinct setiferous pores (Figs 68–70) ..... ***thodunga***

26 Bigger species: 5.0–7.2 mm, anterior tibia in males medially with distinct tooth, elytral interval 9 with 3 indistinct setiferous pores, joint parameres broad but apically narrower (Figs 74–76) ..... ***merklottoi***
– Smaller species: 4.3–5.2 mm, anterior tibia in males without modifications, elytral interval 9 with 4 distinct setiferous pores, joint parameres broadened apically (Figs 71–73) ..... ***kangchendzongensis***

27 Posterior tibia in males medially in the basal third with a distinct tooth, joint parameres finger-like and long (Figs 77–79) ..... ***oedipus***
– Posterior tibia in males without modification, joint parameres spade-like and broad (3 quite similar species, see remarks under *Laena consimilis*) **28**

28 Smaller species: 4.5–6.0 mm, all femora with 2 weak opposite corners (Figs 80–82) ..... ***consimilis***
– Two bigger species: 5.6–7.0 mm, femora with more distinct and sometimes tooth-like corners **29**

29 Each femur ventrally with a tooth-like corner and with an opposite weak corner (Figs 83–85) ..... ***franzi***
– Each femur ventrally with a sharp but not tooth-like corner and with an opposite weak corner (Figs 86–88) ..... ***pseudofranzi***

30 Two very big species: 8.5–11.5 mm **31**
– Several smaller species, maximal length in single species 7.5 mm **32**

31 Elytral rows with long and erect setae, pronotum longer, joint parameres with blunt tip (Figs 89–91) ..... ***longipilis***
– Elytral rows without or with very short adpressed setae, pronotum shorter, joint parameres with rounded tip (Figs 92–94) ..... ***broscosomoides***

32 Elytral intervals 9+7 or 9+7+5 or 9+7+5+3 at least basally with distinct setiferous pores **33**
– Distinct setiferous pores, if any, only at elytral interval 9 ..... **39**

33 Anterior corners of the pronotum protruding, eyes somewhat reduced (Figs 95–97) ..... ***tamang* n.sp.**
– Anterior corners of the pronotum rounded **34**

34 Elytra with rows of punctures without striae, joint parameres triangular with acute tip **35**
– Elytra with rows of punctures in distinct or feeble striae, joint parameres with rounded tip **36**

35 Punctures of the elytral rows with long and erect setae and elytral intervals without setae, posterior tibia in males without modification (Figs 98–100) ..... ***pahakhola* n.sp.**

– Punctures of the elytral rows without any setae and elytral intervals with long and erect setae, posterior tibia of males in some populations medially swollen (Figs 101–104) ..... ***limbu* n.sp.**

36 Pronotum with dense and big punctures, distance as 0.5–5 diameters, maximal width of the pronotum in the middle, lateral margin similarly narrowed towards apex and base (Figs 105–107) ..... ***chetri* n.sp.**
– Pronotum without any or at most with a few scattered punctures, maximal width of the pronotum in the anterior third, lateral margin distinctly narrowed towards base and not so towards apex **37**

37 Elytra with distinct striae without any punctures (only in a single specimen with microscopic small punctures), joint parameres narrower with acute tip (Figs 112–114) ..... ***chomolungma* n.sp.**
– Elytra with rows of distinct punctures in feeble striae, joint parameres broader with rounded tip **38**

38 Bigger species: 6.3–7.5 mm, pronotum and elytra polished and shining, joint parameres triangular (Figs 108–111) ..... ***sagarmatha* n.sp.**
– Smaller species: 5.0–5.3 mm, pronotum and elytra dull, joint parameres shorter and spade-like (Figs 115–117) ..... ***opacicollis***

39 Lateral margin of pronotum with distinct tooth-like crenulation **40**
– Lateral margin of pronotum bordered or unbordered, but smooth **42**

40 Small species: 3.0–3.6 mm, elytra with rough and confluent punctation as on pronotum and without any separation in elytral rows and intervals, lateral part of elytra posteriorly (no interval) with 2 distinct tooth-like setiferous pores and humeral region without setiferous pore (Figs 121–123) ..... ***annapurna* n.sp.**
– Two bigger species: 4.8–7.0 mm, elytra with punctural rows and separated intervals, elytral interval 9 posteriorly with 2 and in humeral region with 1 distinct or indistinct setiferous pores **41**

41 Joint parameres extremely long, elytral intervals wrinkled and with microgranules, interval 9 with 3 distinct tooth-like setiferous pores (Figs 127–129) ..... ***crenulicollis***
– Joint parameres triangular, elytral intervals shagreened but smooth, interval 9 with 3 distinct but not tooth-like setiferous pores (Figs 124–126) ..... ***magar* n.sp.**

42 Lateral margin of pronotum completely unbordered **43**
– Lateral margin of pronotum completely bordered or mostly bordered with short unbordered anterior part **48**

43 Elytra with rough and confluent punctation as on pronotum and without any separation in elytral rows and intervals (Figs 133–135) ..... ***newar* n.sp.**
– Elytra with punctural rows and separated intervals **44**

44 Dorsal side distinctly dull, alternate elytral intervals 3+5+7 distinctly keel-like at least partly (Figs 118–120) ..... ***khumbuana***
– Dorsal side shining, all elytral intervals flat or at most slightly convex **45**

45 Pronotum distinctly wider than long, maximal width in the middle (Figs 130–132) ..... ***parateneta***
– Pronotum nearly as long as wide, maximal width before the middle **46**

46 Elytral intervals without any punctures, elytral rows slightly irregular, elytra distinctly wider than pronotum (Figs 136–137) ..... ***jumlana***
– Elytral intervals with distinct serial punctures, elytra narrower and only slightly wider than pronotum **47**

47 Joint parameres long and narrow, humeral setiferous pore of elytral interval 9 tooth-like and more conspicuous than the 2 posterior setiferous pores (Figs 138–140) ***dhorpatanica***
– Joint parameres short and broad, humeral and posterior setiferous pores of elytral interval 9 equal and not so prominent (Figs 141–143) ..... ***martinhauseri* n.sp.**

48 Lateral margin of pronotum distinctly and completely bordered **49**
– Lateral margin of pronotum mostly bordered but unbordered before the anterior corners **60**

49 Eyes distinctly reduced **50**
– Eyes normal or prominent **51**

50 Smaller species: 3.6–3.8 mm, anterior corners of pronotum rectangular, lateral margins of pronotum nearly parallel, joint parameres shorter (Figs 144–146) ..... ***subcoeca***
– Bigger species: 5.0–5.8 mm, anterior corners of pronotum rounded, lateral margins of pronotum rounded, joint parameres longer (Figs 147–149) ..... ***sherpa* n.sp.**

51 Three similar species (see remarks under *Laena chaukiensis*) with round joint elytra, elytra distinctly wider than pronotum **52**
– Several species with longer parallel elytra, elytra at most slightly wider than pronotum **54**

52 Elytra with rows of small punctures in striae, pronotum widest in the anterior part (Figs 150–151) ..... ***chaukiensis***
– Elytra with rows of bigger punctures without striae, pronotum widest in the middle .. **53**

53 Pronotum with big and more scattered punctures, elytral intervals convex (Figs 152–154) ..... ***tachysoides***
– Pronotum with small and denser punctures, elytral intervals flat (Figs 155–156) ..... ***sparsepunctata***

54 Punctures of the elytral rows without or at most with a very short (as diameter of the puncture) adpressed seta, in contrary small serial punctures of the elytral intervals with long and erect seta **55**
– Punctures of the elytral rows and small serial punctures of the elytral intervals with identical setation: either with long erect or longer adpressed setae **57**

55 Bigger species: 5.6–6.0 mm, joint parameres very long (Figs 164–166) ..... ***rhododendri***
– Two smaller species: 3.5–4.0 mm, joint parameres short **56**

56 Joint parameres triangular (Figs 157–160) ..... ***prehimalayica***
– Joint parameres broad and spade-like (Figs 161–163) ..... ***franziana***

57 Setation of the elytral rows and intervals longer but adpressed **58**
– Setation of the elytral rows and intervals long and erect **59**

58 Pronotum nearly as wide as elytra, elytral intervals flat, joint parameres triangular (Figs 167–171) ..... ***herbertfranzi***
– Pronotum distinctly narrower than elytra, elytral intervals slightly convex, joint parameres long (Figs 172–174) ..... ***arun* n.sp.**

59 Elytral intervals flat and with several long and erect setae, anterior corner of the pronotum rounded (Figs 175–178) ..... ***pokharana***
– Elytral intervals convex and only with very few long and erect setae, anterior corner of the pronotum rectangular (Figs 179–181) ..... ***fulunga***

60 Pronotum with big and sometimes confluent punctures, eyes prominent, elytral rows irregular (2 quite similar species, see remarks under *Laena luprops;* 3.58.) **61**
– Pronotum with small and scattered punctures, eyes normal, elytral rows regular (2 quite similar species, see remarks under *Laena ocys;* 3.63.) **62**

61 Pronotum distinctly narrower than elytra, elytral intervals only with few punctures, alternate elytral intervals only slightly elevated (Figs 182–184) ..... ***luprops***
– Pronotum wider and only slightly narrower than elytra, elytral intervals with several punctures, alternate elytral intervals more elevated (Figs 185–187) ..... ***coniceps***

62 Joint parameres shorter, elytral intervals distinctly diminished posteriorly (Figs 188–190) ..... ***ocys***
– Joint parameres longer, elytral intervals only slightly diminishes posteriorly (Figs 191–193) ..... ***loricera.***

Fig. 194. *Above*, mixed broad-leaved forest with *Alnus* along river (Bhojpur Distr., Valley NW Phedi, 1900 m, V.1997), biotope of *Laena limbu* n.sp. and *Laena sagarmatha* n.sp.

Fig. 195. *Below*, forest remnants with *Castanopsis* (Ilam Distr., Mai Pokhari, 2100 m, IV.1988), biotope of *Laena dentipes*, *Laena rai* n.sp. and *Laena tamur* n.sp.

Fig. 196. Forest with *Rhododendron/Abies/Tsuga* (Parbat Distr., Chitre, 2700 m, V.1995), biotope of *Laena franzi* and *Laena pokharana*.

Fig. 197. Forest with *Quercus/Rhododendron* (Dolakha Distr., Hanumante Danda, 2800 m, V.2000), biotope of *Laena coniceps*, *Laena sagarmatha* n.sp., *Laena subcoeca* and *Laena thodunga*.

Fig. 198. Forest with *Picea* (Jumla Distr., Khali Lagna Pass, 3500 m, VI.1998), biotope of *Laena broscosomoides* and *Laena consimilis*.

Fig. 199. Forest with *Abies/Rhododendron* (Taplejung Distr., Simbua Khola, 3500 m, V.1988), biotope of *Laena gairibasensis*, *Laena kangchendzongensis*, *Laena merklottoi* and *Laena nishikawai*.

6. Zoogeographical and biological notes

One of the main reasons for the extraordinary biodiversity in the Himalayas is the enormous vertical zonation of about 6000 m, with a high number of ecological niches. This "biological belt" is crowned by additonal 3000 m of rocks and ice beeing of less importance for the fauna and flora. The quite young folding up of the Himalayas since the Tertiary age with a lot of mountain ranges isolated by deep valleys stimulate particularly those faunal components with lesser migratory capabilities, particularly members of the flightless soil fauna, to evolve from single ancestors just on the place to species swarms by adaptation on the permanent changing ecological conditions, thus to neo-endemic species. In other words: the Himalayan fauna is mainly an immigration fauna and to be understood as adapted to different climatic belts and vegetation zones. MARTENS (1984) firstly assigned different immigration routes of the faunal components into the different vertical belts of the Central Himalayas. The areas, from where those ancestores of the recent fauna of *Laena* migrated to the Himalayas, are still unknown – probably (because of their recent distribution mainly in the moist forests of the Nepalese subalpine belt) they arrived mostly from the southwestern Chinese mountains in Sichuan and Yunnan (where today species of *Laena* are also quite abundant), and to a lesser extent from the Tibetan highlands and surely not from Oriental southeastern Asia.

Nepal can be ecologically divided not only vertically but also horizontally (see the different vegetation zones from the west to the east in Fig. 200). This phytogeographical diversity is mainly based on quite different precipitations, being much higher in the east and distinctly lower in the west. Bigger areas in western and northern Nepal are protected from the heavy monsoon rains by high mountain ranges. The distribution of *Rhododendron* species might be an indicator for this ecological difference: In the west only 5 species are known, in eastern Nepal grow, on the contrary, about 30 species of *Rhododendron*.

In Nepal, the species of *Laena* live in a belt from 1600 up to 5000 m, thus in all natural vegetation zones above the tropical and subtropical belt, but being concentrated in the moist and temperate subalpine forests from about 2800 to 4200 m (Himalayan West Chinese belt sensu MARTENS 1984) (Fig. 200). For some types of Nepalese forests housing different *Laena* communities see Figs 194–199. The species of *Laena* can be found mostly in mature forests by sifting soil litter and rotten wood, and also by turning stones particularly above timberline, they are absent on devastated agricultural lands.

The distributional patterns of the *Laena* species in Nepal are quite different, some (idealized) areas of selected species are mapped in Figs 201–202. It is striking that not a single species is known from western Nepal as well as from the adjacent Indian Uttar Pradesh, whereas in the east several species (for example *dentipes*, *gairibasensis*, *kangchendzongensis*, *merklottoi*) penetrate from the Indian Darjeeling and Sikkim into eastern Nepal. Only a single species, *Laena longipilis*, is distributed allover Nepal in the altitudinal belt 2200–3800 m from the Jumla District in the west up to the Taplejung District in the east. Other species (for example *alpina*, *annapurna* n.sp., *chetri* n.sp., *dhorpatanica*, *goetzi*, *newar* n.sp., *schmidti* n.sp., *sparsepunctata*, *tamang* n.sp.) are known only from single localities, several (for example *herbertfranzi*, *loricera*, *luprops*, *martensi*, *sagarmatha* n.sp., *studiosa*) occur in an area from Kathmandu/Gosainkund eastward up to the Ting Sang La or even to the Solokhum-

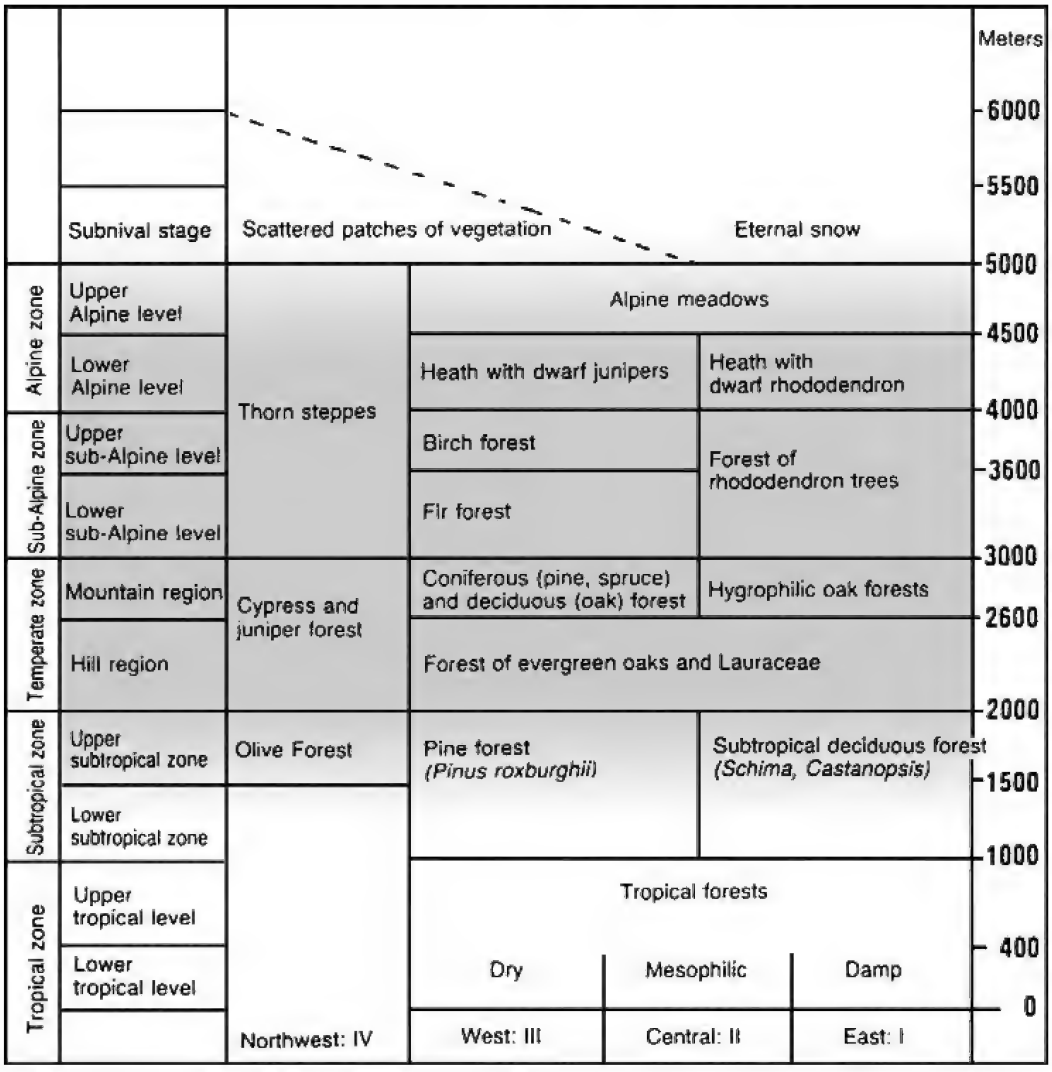


Fig. 200. The vegetation belts with the most important plant communities in Nepal; the Roman numerals at the bottom indicate the floral regions of Nepal; modified from MARTENS (1984). The vertical belt between 1600 m and 5000 m in Nepal is settled by the species of the genus *Laena*, marked here with a darker background.

bu, other species from Kathmandu westward up to Thakkhola or even further (*pokharana*, *prehimalayica*, *tachysoides*), and comparably few species are restricted to the western areas around Jumla and Simikot (*dampaensis*, *hartmanni* n.sp., *pseudofranzi*, *magar* n.sp.). Selfevidently, the known distributional areas reflect also collecting activities and further samples from remote areas might enlarge our present knowledge.

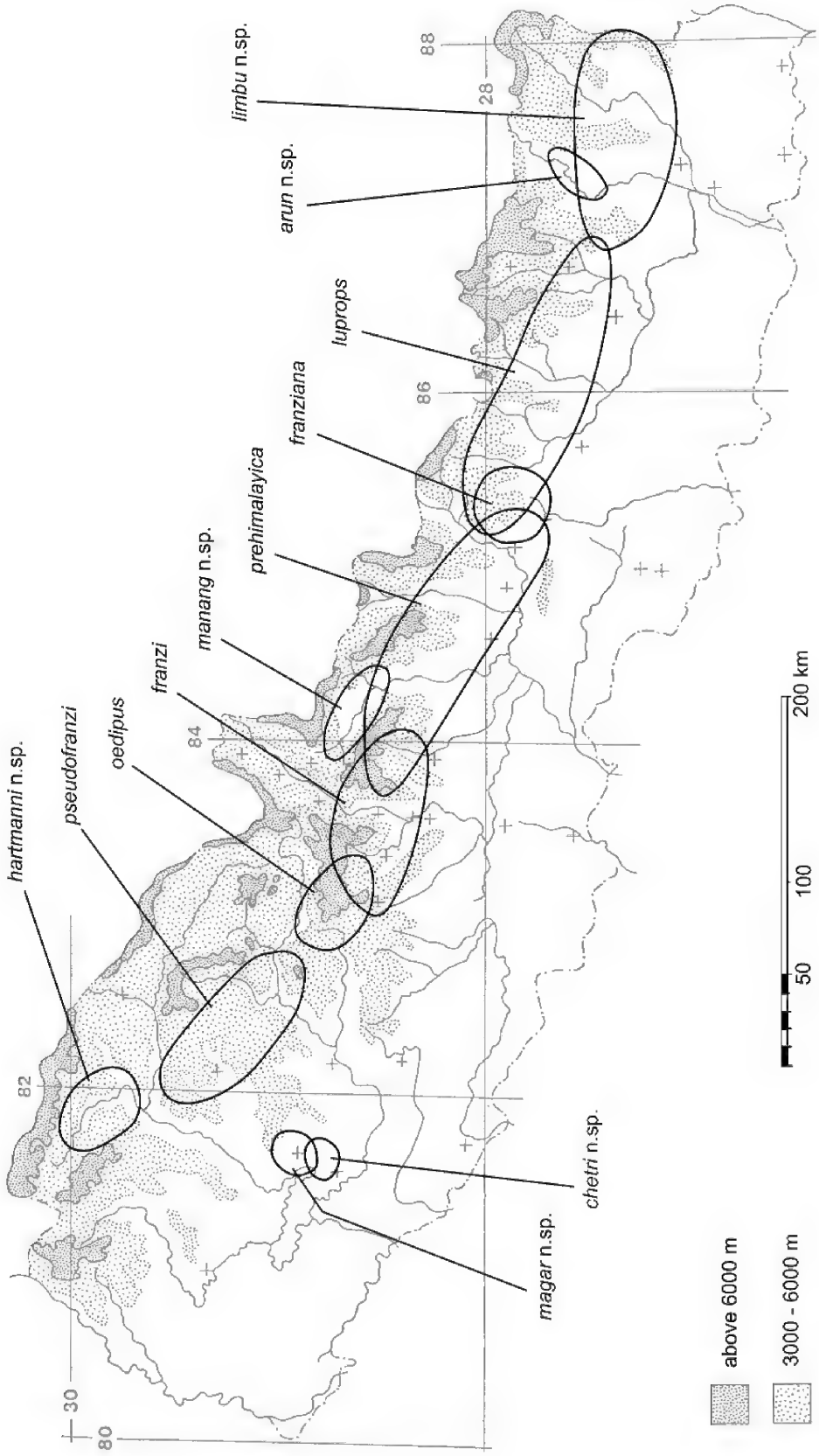


Fig. 201. Distributional pattern (idealized) of selected *Laena* species in Nepal.

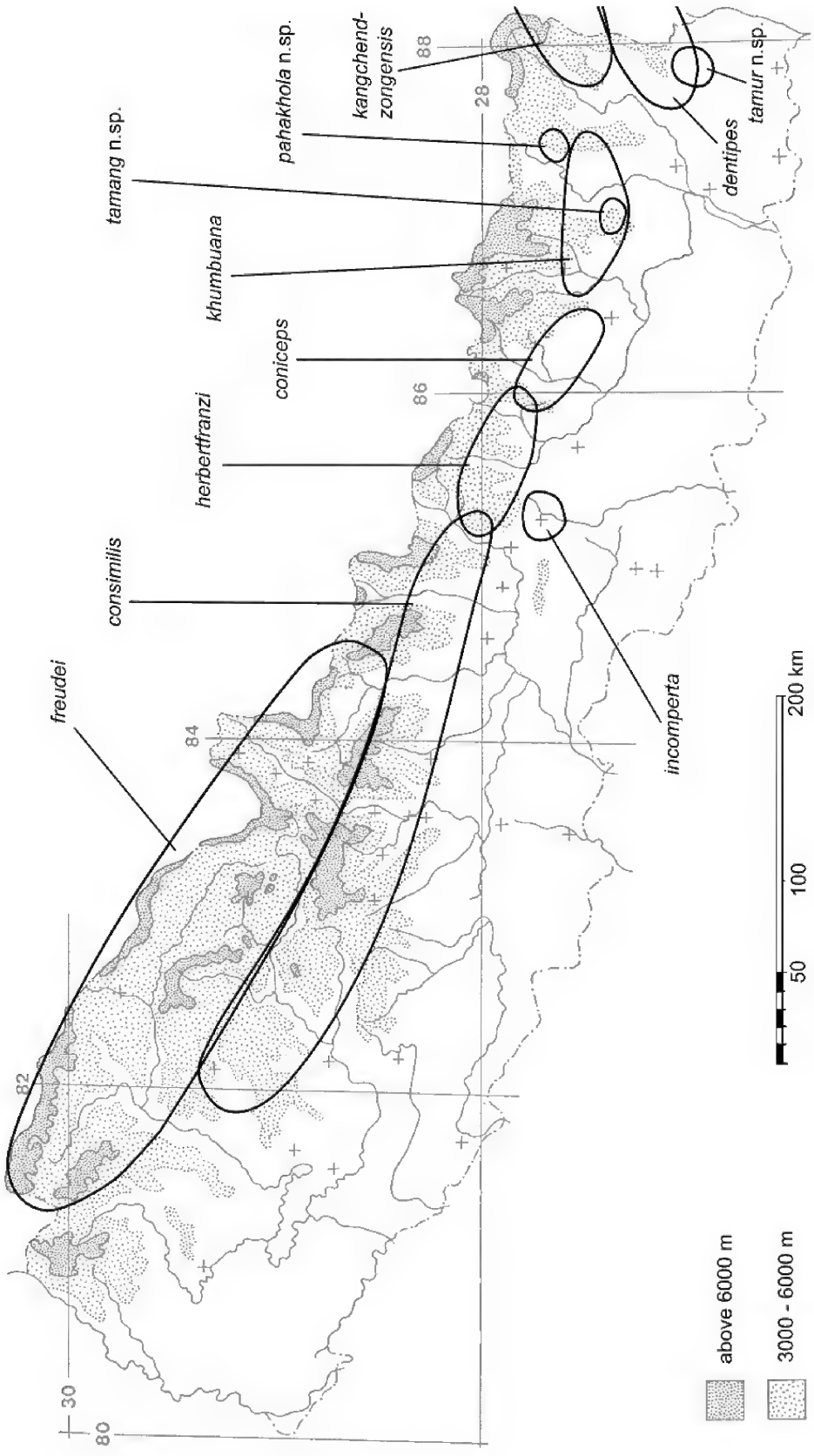


Fig. 202. Distributional pattern (idealized) of selected *Laena* species in Nepal.

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